LUNA: THE WHALE THAT ADOPTED A VILLAGE

NOVEMBER 2004

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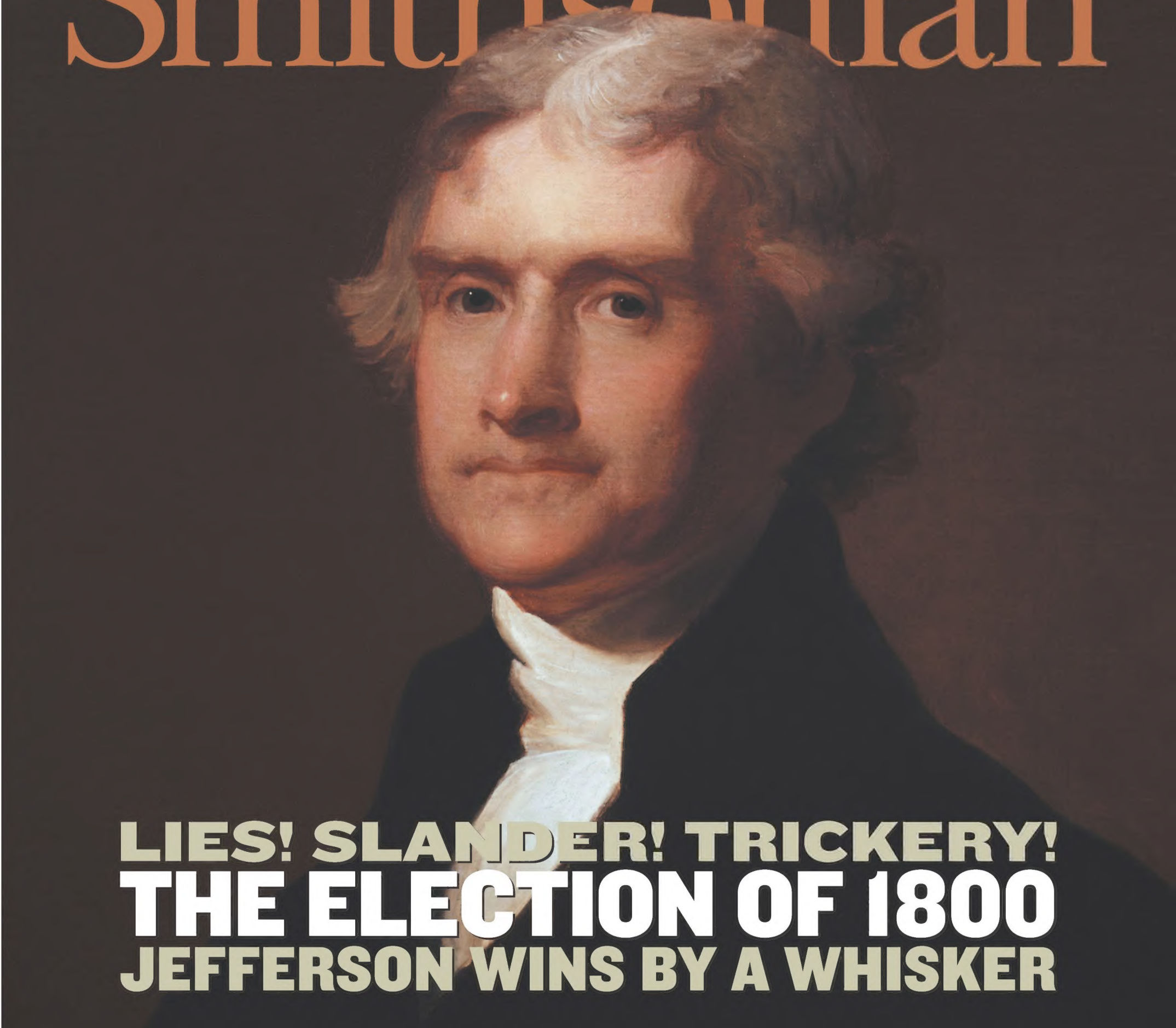

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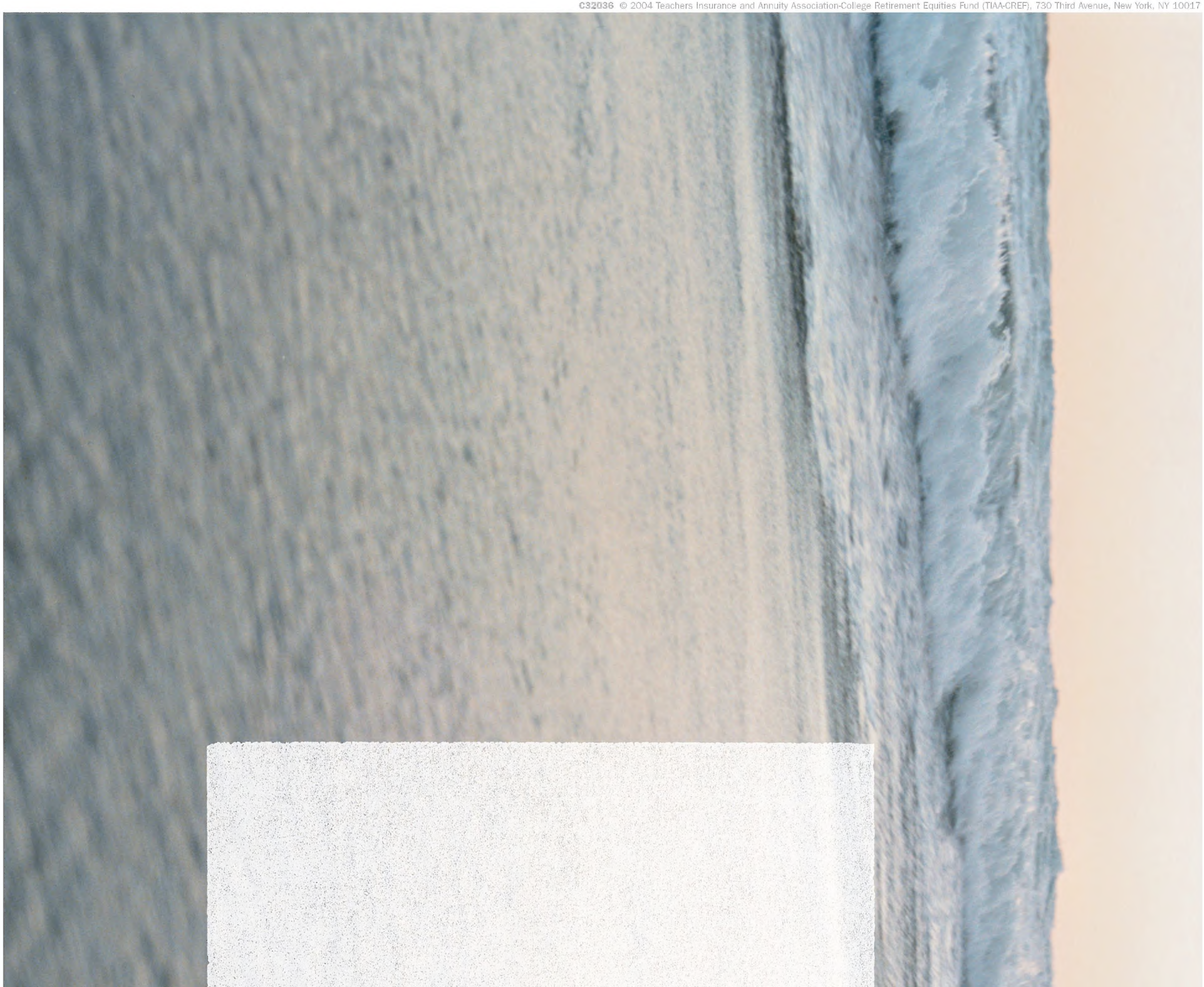

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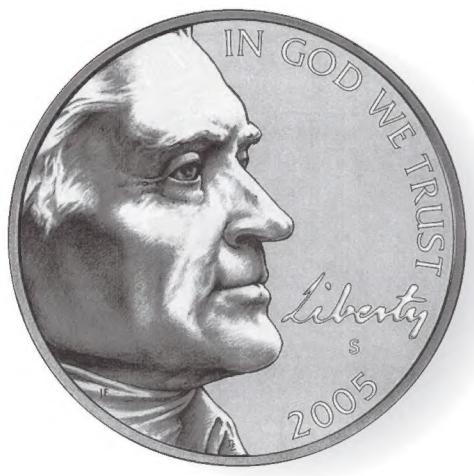
FEATURES

"ORCAS ARE extraordinarily social; the southern residents stay together in their pods all their lives, which can be as long as humans'. But in Nootka Sound, Luna had no pod, so he made one out of people."
—"WHALE OF A TALE," PAGE 64

56 Art Deco left its mark on everything from architecture (Miami Beach hotels) to ocean liners.



44 Jefferson (on the new nickel) sought the presidency "with sincere zeal."

72 To Alexander the Great (actor Colin Farrell), the "pleasure of battle . . . was irresistible."

44 CLIFFHANGER: THE ELECTION OF 1800
When Thomas Jefferson beat incumbent John Adams but tied Aaron Burr, the election of 1800 went to the House of Representatives. Then the fun began
BY JOHN FERLING

56 ART DECO: HIGH STYLE
A major exhibition showcases the streamlined, glamorous look that dominated architecture and the decorative arts during the 1920s and '30s
BY STANLEY MEISLER

64 WHALE OF A TALE
What began as a story of a lone orca named Luna who took up residence in Vancouver Island's Nootka Sound soon evolved into something much deeper
BY MICHAEL PARFIT

72 MIGHTY MACEDONIAN
Military genius and warrior king, Alexander the Great inflames the imagination. But the truth about the single-minded conqueror remains maddeningly elusive
BY RICHARD COVINGTON

84 WALKING AMERICA
Hitting the road on foot with a dog and camera, photojournalist Aaron Huey found inquisitive, generous people willing to open their lives to him
PHOTOGRAPHS BY AARON HUEY / TEXT BY ANDREW CURRY

90 AMERICA'S FIRST IMMIGRANTS
Scientists have long believed that the first North Americans, the Clovis people, migrated from Asia across a land bridge to Alaska. But new evidence suggests a water voyage—possibly from Europe
BY EVAN HADINGHAM

100 WHAT LIES BENEATH
Below the ancient streets and *palazzos* of Naples, Italy, rests a vast netherworld of vividly painted catacombs, mazelike tunnels, watercourses and Roman ruins
BY DAN HOFSTADTER / PHOTOGRAPHS BY ENRICO FERORELLI

ON THE COVER Thomas Jefferson (a copy of Gilbert Stuart's 1805 portrait) believed that the ruling Federalist Party was waging war against the "spirit of 1776." *FROM BETTMAN / CORBIS.*

64 Though Luna the orca (frolicking in a boat's wake) has made a big splash with most residents of Vancouver Island's Nootka Sound, not everyone is captivated by the people-loving mammal.

PATRICK WARD / CORBIS; GETTY IMAGES; JAAP BUITENDIJK / WARNER BROTHERS; DEDDEDA STEMLER / VICTORIA TIMES COLONIST

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DEPARTMENTS

"LIKE MOST AMERICANS, I still remember my first vote in a presidential election. I think I won't mention the candidates, though rest assured Warren G. Harding was not one of them."
—"PEOPLE'S CHOICE," PAGE 26

30 Scientists studying inherited traits find an annual pilgrimage to Ohio doubly rewarding.

23 Contrite over his subway photos, Walker Evans later called himself a "penitent spy."

117 A Pyrrhic victory? The Tet Offensive (G.I.'s in Vietnam in 1968) still prompts the question.

112 Cai Guo-Qiang tries to use fireworks in new ways. (His "Ethereal Flowers" show took place in 2002 at a cemetery in Trento, Italy.)

23 INDELIBLE IMAGES SUBWAY SPY
Walker Evans' surreptitious photographs of New York City riders get fresh exposure as the rail system celebrates its centennial *BY TERENCE MONMANEY*

26 THE OBJECT AT HAND PEOPLE'S CHOICE
One vote for the pre-chad machine that tallied our ballots *BY OWEN EDWARDS*

30 PHENOMENA & CURIOSITIES TWIN SCIENCE
The world's largest annual gathering of twins—the Twins Days Festival in Twinsburg, Ohio—is mothers' milk to geneticists *BY MARK WHEELER*

112 PEOPLE FILE ART THAT GOES BOOM
Since exploding onto the scene in the late 1980s, Cai Guo-Qiang has dazzled spectators around the world with his pyrotechnic displays of public art
BY ANN WILSON LLOYD

117 PRESENCE OF MIND TET: WHO WON?
Nearly 40 years after the North Vietnamese launched a New Year's offensive against U.S. forces, the battle still sparks debate *BY DON OBERDORFER*

11 EDITOR'S NOTE CLOSE ENCOUNTERS
14 FROM THE SECRETARY AMERICANS AT WAR
16 LETTERS Francis Scott Key; saving chestnut trees; the Hmong . . .
21 THIS MONTH IN HISTORY Ellis Island; Sousa; "Sesame Street". . .
34 JUST LOOKING A NEW BEGINNING
36 LEWIS AND CLARK SETTING BOUNDARIES
39 AROUND THE MALL "The Price of Freedom: Americans at War"
124 THE LAST PAGE WISH I'D THOUGHT OF THAT

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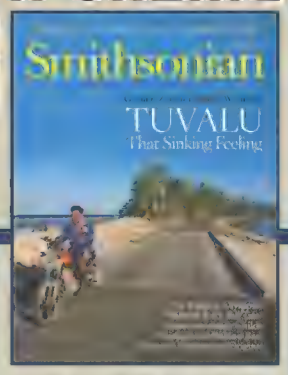

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Close Encounters

Northwest of Seattle, an overly friendly orca polarizes a community – BY CAREY WINFREY

FOR MUCH OF Luna the orca's excellent adventure ("Whale of a Tale," p. 64), Mike Parfit and his wife, Suzanne, a photographer, were the only journalists actually out on Nootka Sound, 250 miles from Seattle on Canada's Pacific Coast. It was there that Luna had settled in, nuzzling boats and putting on a playful show. Over a period of several months, the Parfits would zoom along in their boat, a Zodiac, getting as close as legally possible to the whale—the Canadian government had imposed a 500-meter buffer zone—then jump out onto a rock, set up a tripod and watch the action through telephoto lenses. After some days of this, indigenous natives, who call themselves the Mowachaht/Muchalaht First Nation, gave Parfit a nickname. Finally, one of them explained that a mink dashes from one side of the river to another, then stands up on a rock to look around, then dashes off again. "So now when I see one of the natives, I'm greeted, 'Hey, Mink!'"

Mike Parfit: "And there was Luna, his broad back right next to me, pushing on the boat."

One afternoon Parfit had his own close encounter of the Luna kind. He was approaching the dock when the Zodiac suddenly shifted direction. "And there was Luna, his broad back right next to me, pushing on the side of the boat." Parfit shut down the engine, and Luna nudged the boat over, allowing Parfit to jump out and tie up. He then watched the whale push the Zodiac back and forth on its bowline for about half an hour, until another boat got Luna's attention.

Parfit says that working on this story reminded him just how unexpected journalism can be—and how important it is to plan for contingencies. "Suzanne and I stashed some fuel at a marina about 15 miles from our base. We also hauled a tent, food, water and equipment up a hill overlooking a holding pen in the water."

On the day that wildlife authorities planned to capture Luna, Parfit took his wife to the tent on the hill, then waited near the Zodiac for the excitement to begin. When, unexpectedly, natives showed up in canoes and began leading Luna away, a surprised Parfit joined the chase. "I had no food or water in the boat and not much fuel," he says. "The natives led Luna for miles, as I followed, and I would never have been able to get back except for the can of gas we'd stashed at the marina. Meanwhile, Suzanne was stuck up on the hill with nothing to watch except a group of baffled scientists pacing around. So the more elaborate of our plans had not been useful, but the contingency planning saved the day. And the story had changed completely."

Smithsonian PHOTO CONTEST

In September we published the rules for our second annual photo contest, which will accept both digital and mail submissions until midnight December 31, 2004. Rules for this year's contest can be found at www.photocontest.smithsonianmagazine.com.

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Americans at War

A new exhibition explores the personal dimensions of war: valor and resolve—but also sacrifice and loss

TIME AND AGAIN throughout the nation's history, Americans have paid the price of going to war. America and its founding values were born of conflict, and wars subsequently helped to set the physical boundaries of the nation. More important, for two and a half centuries wars have proved to be defining episodes in the development of our national identity. That epic tale of continual transformation is now told in a sweeping new exhibition, "The Price of Freedom: Americans at War," opening in the National Museum of American History (NMAH) on Veterans Day. The exhibition guides visitors through the major wars the nation has fought, on native soil and in foreign lands, from the French and Indian War and the Revolutionary War in the 18th century down through this century's operations in Afghanistan and Iraq.

"The Price of Freedom: Americans at War" occupies more than 18,000 square feet in NMAH and encompasses a greater chronological span of American history than any other current exhibition in the museum. The straightforward subtitle, Americans at War, makes an essential point about the approach: though nations declare wars, individuals fight them, sacrifice and suffer in them, often far from battlefields and combat zones, and are altered in their course. Military history may seem a narrow prism through which to view national life, but the perspective it offers is surprisingly wide, embracing social, cultural, economic and technological dimensions that sometimes have a long afterlife indeed. The Civil War did not end with Appomattox, or the Vietnam War with a peace agreement in 1973; the confidence that came with victory in World War II lifted America for decades.

More than 800 objects will be on display, not just the guns, uniforms, military and medical equipment, medals and flags that one would expect, but posters, magazines, furniture, games, cookware, money, musical instruments and more—emblems large and small of each remembered era. The section on the War of 1812, for example, contains three fragments of the Star-Spangled Banner that were clipped off as souvenirs in the 19th century. (The flag itself, the central object of NMAH's collections, forever associated with American resolve during wartime, can be seen undergoing meticulous conservation elsewhere in the museum.)

The smallest items in the show are flakes of the gold that lured thousands of settlers West to California soon after Mexico ceded the territory to the United States as a prize of war. The largest object is a Huey helicopter, the Bell UH-1, some 57 feet long and 15 feet high, the whomping workhorse of the Vietnam War. Thousands of Hueys took part in that war, and even for Americans who knew the conflict only through the media, the images the Hueys evoke are still indelible. In addition to the hundreds of objects, the exhibition features a striking introductory sound-and-light display, large graphic murals and maps, including a three-dimensional map of the Battle of Yorktown, and a series of interactive audio and visual installations. Visitors so inclined will get to fire the shot heard round the world—and restart the Revolution.

Wars (a World War II pin) have proved to be defining episodes in our national identity.

Winston Churchill once wrote of great battles that they "change the entire course of events, create new standards of values, new moods, new atmospheres." That is surely true of America, and the NMAH exhibition offers abundant evidence of just how influential and how sobering the country's long record of military engagement has been. But the exhibition's insistence on the personal dimension of warfare suggests something else as well: that material evidence is not the only gauge of war's effects. In the end, the price of freedom may be incalculable because its true costs lie buried so deep within individuals, where no one can fully take their measure.

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LETTERS

Readers respond to the September issue:

Francis Scott Key,
who wrote the words that would become our national anthem, had opposed America's entry into the War of 1812
PATRIOT

ANTIWAR PATRIOT?

NORMAN GELB'S excellent article on Francis Scott Key was marred by an inexplicable headline, "Reluctant Patriot." The article contains absolutely nothing that would indicate any lack of patriotism by the author of "The Star-Spangled Banner." Key did have reservations about the United States declaring war on England, but there is no connection between an American's feelings about the wisdom of any particular war and that person's patriotism.

L. A. HEBERLEIN
SEATTLE, WASHINGTON

MR. GELB'S THUMBNAIL summary of the War of 1812 surprisingly ignores Commodore Oliver Hazard Perry's defeat of the British Navy in the Battle of Lake Erie on September 10, 1813. That victory ended British control of the Great Lakes, and was the occasion of Perry's famous message sent to Gen. William Henry Harrison (at Fort Ball, Ohio), "We have met the enemy and they are ours. . . . " Harrison's military successes in Ohio, Michigan and Ontario contributed to his ultimate election to the presidency.

WILLIAM T. WICKHAM
TIFFIN, OHIO

ENDANGERED INDUSTRIES

DESCRIBING THE demise of humpback whales in "Unexpected Antarctica," Paul Arthur Berkman is quoted as saying that from a population of 100,000 a century ago in Antarctica, they're down to fewer than 3,000, largely because of whale hunting. "The whaling industry made itself commercially extinct," he says. This should also be a warning to the logging industry, the crabbing industry, salmon fishermen—and any industry that wantonly takes as much product as it likes without

Cialis is not for everyone. If you take nitrates, often used for chest pain (also known as angina), or alpha-blockers (other than Flomax 0.4 mg once daily), prescribed for prostate problems or high blood pressure, do not take Cialis. Such combinations could cause a sudden, unsafe drop in blood pressure. Don't drink alcohol in excess (to a level of intoxication) with Cialis. This combination may increase your chances of getting dizzy or lowering your blood pressure. Cialis does not protect a man or his partner from sexually transmitted diseases, including HIV.

The most common side effects with Cialis were headache and upset stomach. Backache and muscle ache were

regard for future replenishment. By doing so, these industries also put themselves in peril.

LINDA KAY ROSE
DELAPLANE, VIRGINIA

INDIAN VISITORS

THE NATIONAL Museum of the American Indian sounds wonderful, and we look forward to visiting it. However, I must take issue with a comment by one of the American Indians ("A Long Time Coming") that "the people of the United States finally recognize that historically they are visitors to this land and newcomers." All peoples who have settled this beautiful land, whether Indians or descendants of Europeans, are visitors. It does not belong to anyone.

EMMA LOU DIEMER
SANTA BARBARA, CALIFORNIA

I WAS HAPPY to learn from "By the People" that Indians are achieving a "renaissance." It is wonderful to know some are recovering from the brutalities of the past.

MARIE-CLAIRE LAJOIE
MONTREAL, CANADA

OLD CHESTNUTS

I ENJOYED "Chestnutty," on saving the mighty American chestnut tree. In the mountains of eastern West Virginia where I live, you can still see huge rotting chestnut stumps in the woods. My old farm, which once used the trees as reference points in a property survey, is fenced with split chestnut rails. I would love to have seen these trees in their prime. Keep at it, James Craddock—a lot of us are waiting for the real thing.

BARB KILDARE
VALLEY HEAD, WEST VIRGINIA

ADVISING THE HMONG

IN A PHOTOGRAPH in "American Odyssey," about the Hmong people, there is an Army officer in a light-colored uniform standing with his hands on his hips watching Hmong soldiers train near the Vietnam-Laos border. He is my father, Linwood B. Mather. Our family lived in Bangkok from 1960 to 1962. My father traveled during the week and only came home on the weekends. We never knew what he was doing. Now we know. Thanks for the trip down memory lane.

CAROL V. MATHER
LORTON, VIRGINIA

Please send letters to LettersEd@simag.si.edu or to **Letters, Smithsonian, MRC 951, P.O. Box 37012, Washington, D.C. 20013.** Include a telephone number and address. Letters may be edited for clarity or space. Because of the high volume of mail we receive, we cannot respond to all letters. Send queries about the Smithsonian Institution to info@si.edu or to VIARC, Public Inquiry Mail Service, P.O. Box 37012, Washington, D.C. 20013.

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Ask your doctor if prescription Cialis is right for you. See important safety information below and Patient Information on following page.

† Individual results may vary. Not studied for multiple attempts per dose.*

Cialis®
(tadalafil) tablets

www.cialis.com
1-877-4-CIALIS

also reported, sometimes with delayed onset. Most men weren't bothered by the side effects enough to stop taking Cialis. Although a rare occurrence, men who experience an erection for more than 4 hours (priapism) should seek immediate medical attention. Discuss your medical conditions and medications with your doctor to ensure Cialis is right for you and that you are healthy enough for sexual activity.

**In clinical trials, Cialis was shown to improve, up to 36 hours after dosing, the ability of men with ED to have a single successful intercourse attempt.*

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Patient Information

Cialis® (tadalafil) tablets

Read the Patient Information about CIALIS before you start taking it and again each time you get a refill. There may be new information. You may also find it helpful to share this information with your partner. This leaflet does not take the place of talking with your doctor. You and your doctor should talk about CIALIS when you start taking it and at regular checkups. If you do not understand the information, or have questions, talk with your doctor or pharmacist.

What important information should you know about CIALIS?

CIALIS can cause your blood pressure to drop suddenly to an unsafe level if it is taken with certain other medicines. You could get dizzy, faint, or have a heart attack or stroke.

Do not take CIALIS if you:

- **take any medicines called "nitrates."**
- **use recreational drugs called "poppers" like amyl nitrate and butyl nitrate.**
- **take medicines called alpha blockers, other than Flomax® (tamsulosin HCl) 0.4 mg daily.**

(See "Who should not take CIALIS?")

Tell all your healthcare providers that you take CIALIS. If you need emergency medical care for a heart problem, it will be important for your healthcare provider to know when you last took CIALIS.

After taking a single tablet, some of the active ingredient of CIALIS remains in your body for more than 2 days. The active ingredient can remain longer if you have problems with your kidneys or liver, or you are taking certain other medications (see "Can other medications affect CIALIS?").

What is CIALIS?

CIALIS is a prescription medicine taken by mouth for the treatment of erectile dysfunction (ED) in men.

ED is a condition where the penis does not harden and expand when a man is sexually excited, or when he cannot keep an erection. A man who has trouble getting or keeping an erection should see his doctor for help if the condition bothers him. CIALIS may help a man with ED get and keep an erection when he is sexually excited.

CIALIS does not:

- cure ED
- increase a man's sexual desire
- protect a man or his partner from sexually transmitted diseases, including HIV. Speak to your doctor about ways to guard against sexually transmitted diseases.
- serve as a male form of birth control

CIALIS is only for men with ED. CIALIS is not for women or children. CIALIS must be used only under a doctor's care.

How does CIALIS work?

When a man is sexually stimulated, his body's normal physical response is to increase blood flow to his penis. This results in an erection. CIALIS helps increase blood flow to the penis and may help men with ED get and keep an erection satisfactory for sexual activity. Once a man has completed sexual activity, blood flow to his penis decreases, and his erection goes away.

Who can take CIALIS?

Talk to your doctor to decide if CIALIS is right for you.

CIALIS has been shown to be effective in men over the age of 18 years who have erectile dysfunction, including men with diabetes or who have undergone prostatectomy.

Who should not take CIALIS?

Do **not** take CIALIS if you:

- **take any medicines called "nitrates"** (See "What important information should you know about CIALIS?"). Nitrates are commonly used to treat angina. Angina is a symptom of heart disease and can cause pain in your chest, jaw, or down your arm.

  Medicines called nitrates include nitroglycerin that is found in tablets, sprays, ointments, pastes, or patches. Nitrates can also be found in other medicines such as isosorbide dinitrate or isosorbide mononitrate. Some recreational drugs called "poppers" also contain nitrates, such as amyl nitrate and butyl nitrate. Do not use CIALIS if you are using these drugs. Ask your doctor or pharmacist if you are not sure if any of your medicines are nitrates.
- **take medicines called "alpha blockers", other than Flomax® 0.4 mg daily.** Alpha blockers are sometimes prescribed for prostate problems or high blood pressure. If CIALIS is taken with alpha blockers other than Flomax® 0.4 mg daily, your blood pressure could suddenly drop to an unsafe level. You could get dizzy and faint.
- **you have been told by your healthcare provider to not have sexual activity because of health problems.** Sexual activity can put an extra strain on your heart, especially if your heart is already weak from a heart attack or heart disease.
- **are allergic to CIALIS or any of its ingredients.** The active ingredient in CIALIS is called tadalafil. See the end of this leaflet for a complete list of ingredients.

What should you discuss with your doctor before taking CIALIS?

Before taking CIALIS, tell your doctor about all your medical problems, including if you:

- **have heart problems** such as angina, heart failure, irregular heartbeats, or have had a heart attack. Ask your doctor if it is safe for you to have sexual activity.
- **have low blood pressure or** have high blood pressure that is not controlled
- **have had a stroke**
- **have liver problems**
- **have kidney problems or require dialysis**
- **have retinitis pigmentosa,** a rare genetic (runs in families) eye disease
- **have stomach ulcers**
- **have a bleeding problem**
- **have a deformed penis shape** or Peyronie's disease
- **have had an erection that lasted more than 4 hours**
- **have blood cell problems** such as sickle cell anemia, multiple myeloma, or leukemia

Can other medications affect CIALIS?

Tell your doctor about all the medicines you take including prescription and non-prescription medicines, vitamins, and herbal supplements. CIALIS and other medicines may affect each other. Always check with your doctor before starting or stopping any medicines. Especially tell your doctor if you take any of the following:

- medicines called nitrates (See "What important information should you know about CIALIS?")
- medicines called alpha blockers. These include Hytrin® (terazosin HCl), Flomax® (tamsulosin HCl), Cardura® (doxazosin mesylate), Minipress® (prazosin HCl) or Uroxatral® (alfuzosin HCl).
- ritonavir (Norvir®) or indinavir (Crixivan®)
- ketoconazole or itraconazole (such as Nizoral® or Sporanox®)
- erythromycin
- other medicines or treatments for ED

How should you take CIALIS?

Take CIALIS exactly as your doctor prescribes. CIALIS comes in different doses (5 mg, 10 mg, and 20 mg). For most men, the recommended starting dose is 10 mg. **CIALIS should be taken no more than once a day.** Some men can only take a low dose of CIALIS because of medical conditions or medicines they take. Your doctor will prescribe the dose that is right for you.

- If you have kidney problems, your doctor may start you on a lower dose of CIALIS.
- If you have kidney or liver problems or you are taking certain medications, your doctor may limit your highest dose of CIALIS to 10 mg and may also limit you to one tablet in 48 hours (2 days) or one tablet in 72 hours (3 days).

Take one CIALIS tablet before sexual activity. In some patients, the ability to have sexual activity was improved at 30 minutes after taking CIALIS when compared to a sugar pill. The ability to have sexual activity was improved up to 36 hours after taking CIALIS when compared to a sugar pill. You and your doctor should consider this in deciding when you should take CIALIS prior to sexual activity. Some form of sexual stimulation is needed for an erection to happen with CIALIS. CIALIS may be taken with or without meals.

Do not change your dose of CIALIS without talking to your doctor. Your doctor may lower your dose or raise your dose, depending on how your body reacts to CIALIS.

Do not drink alcohol to excess when taking CIALIS (for example, 5 glasses of wine or 5 shots of whiskey). When taken in excess, alcohol can increase your chances of getting a headache or getting dizzy, increasing your heart rate, or lowering your blood pressure.

If you take too much CIALIS, call your doctor or emergency room right away.

What are the possible side effects of CIALIS?

The most common side effects with CIALIS are headache, indigestion, back pain, muscle aches, flushing, and stuffy or runny nose. These side effects usually go away after a few hours. Patients who get back pain and muscle aches usually get it 12 to 24 hours after taking CIALIS. Back pain and muscle aches usually go away by themselves within 48 hours. Call your doctor if you get a side effect that bothers you or one that will not go away.

CIALIS may uncommonly cause:

- **an erection that won't go away (priapism).** If you get an erection that lasts more than 4 hours, get medical help right away. Priapism must be treated as soon as possible or lasting damage can happen to your penis including the inability to have erections.
- vision changes, such as seeing a blue tinge to objects or having difficulty telling the difference between the colors blue and green.

These are not all the side effects of CIALIS. For more information, ask your doctor or pharmacist.

How should CIALIS be stored?

- Store CIALIS at room temperature between 59° and 86°F (15° and 30°C).
- **Keep CIALIS and all medicines out of the reach of children.**

General Information about CIALIS:

Medicines are sometimes prescribed for conditions other than those described in patient information leaflets. Do not use CIALIS for a condition for which it was not prescribed. Do not give CIALIS to other people, even if they have the same symptoms that you have. It may harm them.

This leaflet summarizes the most important information about CIALIS. If you would like more information, talk with your healthcare provider. You can ask your doctor or pharmacist for information about CIALIS that is written for health professionals.

For more information you can also visit www.cialis.com, or call 1-877-242-5471.

What are the ingredients of CIALIS?

Active Ingredient: tadalafil

Inactive Ingredients: croscarmellose sodium, hydroxypropyl cellulose, hypromellose, iron oxide, lactose monohydrate, magnesium stearate, microcrystalline cellulose, sodium lauryl sulfate, talc, titanium dioxide, and triacetin.

Rx only

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THIS MONTH IN HISTORY

NOVEMBER ANNIVERSARIES—MOMENTOUS OR MERELY MEMORABLE

50 YEARS AGO:
CLOSING THE DOOR
In November 1954, Ellis Island Immigration Station, "America's front door," closes, 62 years after the first immigrant passed through it. More than 12 million people faced legal and medical exams here to gain entry into the country; 98 percent passed. In 2004 their descendants make up nearly half the U.S. population.

125 YEARS AGO: KA CHING!
Unable to trust the bartenders to keep honest accounts, in 1879 Ohio saloonkeepers James and John Ritty patent a "cash register" that displays each sale on a dial while keeping a running total. It isn't perfect—a cash drawer is added later—but unlike other early efforts, the Rittys' inspires an industry. Today, despite the prevalence of plastic, $736 billion in cash still fills registers worldwide.

35 YEARS AGO: SUNNY DAYS
Educational television turns a corner and winds up on "Sesame Street" in November 1969. Aimed at urban kids, the show's short segments are peopled with a multicultural mix of adults, kids, muppets and a very Big Bird—interspersed with "ads" for letters and numbers. The format still works; 20 versions air in more than 120 countries in 2004.

150 YEARS AGO: LEADER OF THE BAND
Composer and conductor John Philip Sousa is born November 6, 1854, in Washington, D.C. The son of a Marine Corps Band trombonist, Sousa joins the group himself at 13, taking its lead in 1880. Crowned the "March King" for his 136 exuberant, military-style pieces—including "Semper Fidelis" and "The Washington Post"—Sousa also writes 11 operettas and 3 novels. His best-known work, "Stars and Stripes Forever," is the United States National March. Sousa dies in 1932.

400 YEARS AGO: BEST OF THE BARD
Othello, William Shakespeare's tragedy of envy and deception, premières in 1604. Starring renowned actor Richard Burbage as the Moorish hero betrayed by Iago, his villainous ensign, the play proves popular with centuries of students; loved, perhaps, "not wisely, but too well."

THE
Tragœdy of Othello,
The Moore of Venice.
As it hath beene diuerſe times acted at the Globe, and at the Black-Friers, by his Maieſties Seruants.
First Edition.
Written by VVilliam Shakeſpeare.
George Steevens.
LONDON,
Printed by N. O. for Thom[illegible]ulkley, and are to be ſold at his ſhop, at the Eagle and Child, in Brittans Burſſe.

130 YEARS AGO: PACHYDERM POLITICS
A local hoax involving escaped zoo animals gives New York City artist Thomas Nast an idea for a cartoon about Republicans and their critics—and a political symbol is born. Nast's elephant, published in *Harper's Weekly* in 1874, forges an ongoing link between the Republican Party and the tusked trumpeters. The Democrats' donkey association began in 1837. —*ALISON McLEAN*

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Subway Spy

Walker Evans' underground-breaking photographs resurface for the centennial of New York Cty's rapid transit system ~ BY TERENCE MONMANEY

MANY PHOTOGRAPHERS have stalked humanity in the New York City subway system, which opened 100 years ago last month, but none would be more influential than Walker Evans, one of America's preeminent documentary photographers, who began his sly subterranean project in February 1938.

He was 34 and on the verge of fame, his works scheduled for a solo exhibition later that year at the Museum of Modern Art. Newly returned to Manhattan after journeying in the South, he had photographed with stark lyricism streets, passersby, buildings and even billboards for a U.S. government information agency and then, with the writer James Agee, had painstakingly documented the lives of poor tenant farmers for a magazine assignment that would become the seminal book *Let Us Now Praise Famous Men*, published in 1941.

Evans found his vocation rather late in life. Born in St. Louis in 1903, he attended a string of schools in Pennsylvania, Connecticut and Massachusetts and dropped out of Williams College. After a year in Paris, he fell in with an edgy literary and art crowd in New York City (John Cheever and Lincoln Kirstein were among his friends) that disdained American commercialism. He referred to his father, an advertising executive, as a "professional hack writer." Walker Evans, frustrated by his efforts to become a serious writer, had become a "passionate photographer," he said, by 1930.

METROPOLITAN MUSEUM OF ART, WALKER EVANS ARCHIVE

Evans' gift, says photographer Alex Harris, was "to make an ordinary moment transcendent, make it stand for so much more."

"C'mon," said New York mayor Michael Bloomberg, "get real."

He seized on the subway reportedly because of the variety of people who, for a nickel, put up with the underworld gloom and the racket of the steel-wheeled cars. He was especially drawn to the riders' expressions, the private preoccupied or daydreamy blankness that people often wear when left alone in public. "The guard is down and the mask is off," Evans wrote at the time, adding, "people's faces are in naked repose down in the subway." And the best way to catch them in the act of being themselves, he decided, was to take pictures without their knowledge.

With his camera hung around his neck so the lens peeked out of his coat, he snaked the cable release down his sleeve into his hand. New York City subway seats, then and now, line the car walls and face one another, and Evans, says the photographer Helen Leavitt, would sit down opposite someone who interested him. Leavitt, who is 91 and lives in New York City, accompanied Evans on some of his subway forays, and she recalls how he pointed his chest at a subject and invisibly tripped the shutter with the cable release.

Evans (below) once described his subway photographs as "anonymous and documentary and a straightforward picture of mankind."

The elaborate rig may seem quaint in this day of tiny digital cameras, but it was then state of the art, and Evans wielded the apparatus with clinical detachment, compiling more than 600 photographs of subway riders over three years. Some were published in magazines in 1956 and 1962, and MoMA exhibited many of them in 1966. That year, Evans published a book of 89 subway photographs, *Many Are Called*. It has just been reissued, coinciding with the subway's centennial.

Looking at the pictures now, one notices first the bygone fashions, the pencil-thin mustaches and fur stoles. And the hats! Almost everybody wears a hat: a fedora, a homburg, a pillbox. Also, the pictures that Evans picked for the book, curiously, seem to run to type, with an emphasis on tired-looking, overfed, middle-aged white people. The selection undermines Agee's endorsement of the project, written in 1940, that the subway presented "such an intense and various concentration of human beings as the world has never known before."

Still, the pictures—a man with a boy yawns, a woman in a fur hat gazes into space, an old nun pouts—outlast the moment and convey a sense of his subjects' lived-in selves. Alex Harris, a photographer at the Center for Documentary Studies at Duke University, admires Evans' studied unobtrusiveness. "Evans' art was to take the 'art' out of photography," he says, "to give the viewer of his pictures a sense they were seeing the unadorned thing itself without the photographer's manipulative presence."

Others would take candid subway pictures after Evans, who went on to work for *Fortune* magazine and who died in 1975 at age 71. In fact, the Museum of the City of New York now has an exhibition of such photographs since the 1970s by Bruce Davidson, Camilo José Vergara and Sam Hollenshead. The show marks the subway's anniversary, but it's also timely because the city's Metropolitan Transportation Authority this past spring drafted a regulation prohibiting unauthorized photography in the subways, to prevent terrorist acts by limiting recorded surveillance of the facilities. The agency's governing board will probably vote on the proposal by the end of the year, a spokesman says. Meanwhile, the prospect has sparked outrage—from photographers, civil libertarians and Mayor Michael Bloomberg, who suggested the regulation was too sweeping if it means that a tourist couldn't take a snapshot in a subway station without a permit. "C'mon," he said, "get real."

In a 1962 essay in *Harper's Bazaar* that accompanied several of his subway photographs, Evans voiced misgivings about the methods he'd used to make the pictures, calling himself a "penitent spy." Some scholars question whether he really regretted his hidden camera work. But it's chilling that in the near future even his sort of spying—on the human condition—might be outlawed.

TERENCE MONMANEY, an inveterate straphanger, is SMITHSONIAN's executive editor.

METROPOLITAN MUSEUM OF ART, WALKER EVANS ARCHIVE (3); SYLVIA SALMI / BETTMANN / CORBIS

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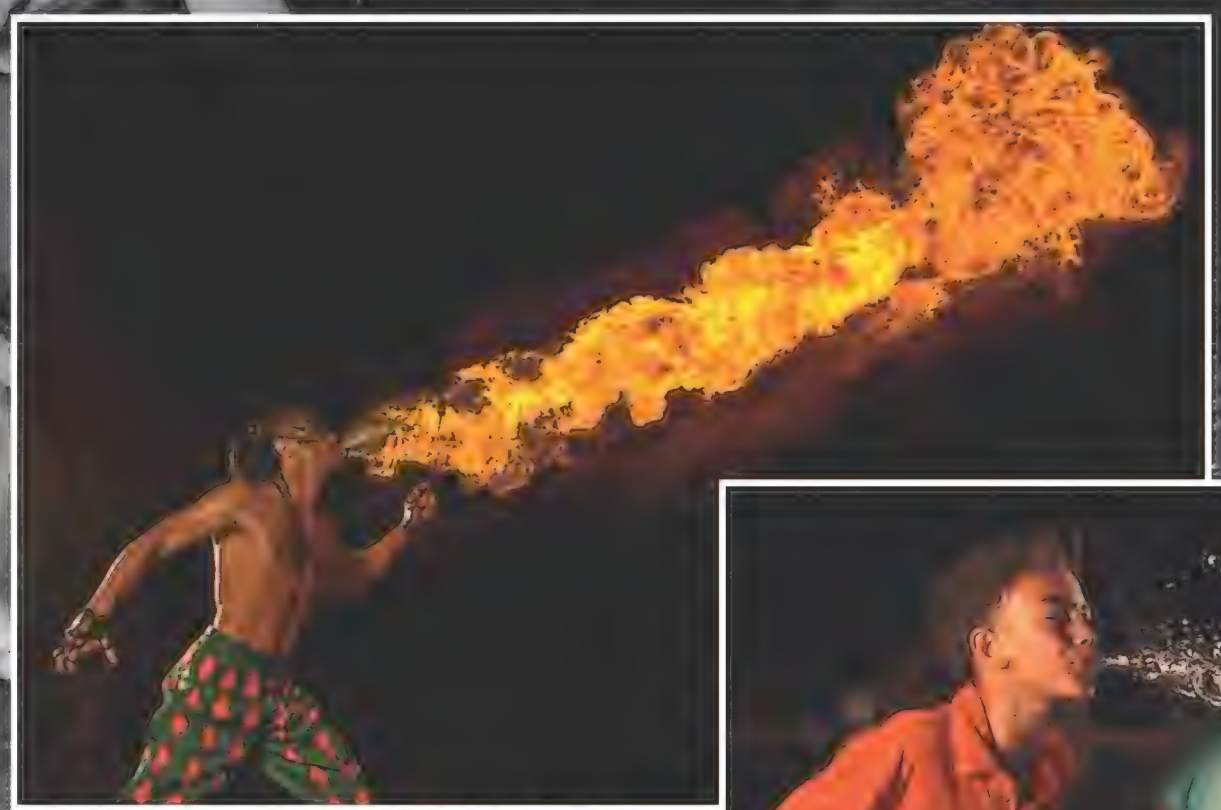

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People's Choice

With the advent of mechanized vote counting in the 1890s, a ballot could be tallied in minutes—not hours or days ~ BY OWEN EDWARDS

[*Gear-and-Lever Voting Machine, c. 1898*]
NATIONAL MUSEUM OF AMERICAN HISTORY

HUGH TALMAN / NATIONAL MUSEUM OF AMERICAN HISTORY, SMITHSONIAN INSTITUTION

LIKE MOST AMERICANS, I still remember my first vote in a presidential election. I think I won't mention the candidates, though rest assured Warren G. Harding was not one of them. Much time and many votes have passed since then, but the memory remains vivid for several reasons. The vote meant that I had reached the age—21 in those bygone days—when I could legally claim my place in the world of adults. It meant, too, that I was not just reading in textbooks about democracy but was actually taking part in its most sacred ritual. That first vote was high on the list of growing-up thrills, right

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"The old gear-and-lever machines are built like bank vaults."

up there with getting my driver's license and having my first legal drink (a manhattan in Manhattan).

What made the moment particularly memorable, too, was the booth into which I stepped to exercise my right and responsibility. Here's how it went: once inside, I moved a large lever to close a curtain. The action of that lever unlocked a bank of smaller levers, one next to each candidate. After pushing those levers to cast my votes, I returned the large lever back to its original position, the curtain opened, and I stepped out and smiled at my fellow voters waiting their turns—briefly a public figure proud of my private act of citizenship.

Throughout much of this country's post-Revolutionary history, writers and politicians have invoked the ballot as a symbol of a right fundamental to our democracy. Now, as the nation moves (inexorably, it seems) toward the day when a touch-screen, virtual ballot will replace real ones everywhere, it seems appropriate to pay homage to another powerful symbol of our right to make our voices heard. Occupying pride of place among the artifacts in a current exhibition at the National Museum of American History, "Vote: The Machinery of Democracy," is an 1890s prototype of the classic gear-and-lever booths in which I and many Americans cast their votes. Not quite a historic relic—machines of this kind are still used in this country—it nevertheless evokes an earlier time, a substantial embodiment of the virtue of the vote, with nothing virtual about it.

As far back as the mid-19th century, political reformers sought to make voting more systematic (and, they hoped, more honest). In the late 1890s, New York inventor Alfred J. Gillespie devised a gear-and-lever machine (derived from earlier patents by Jacob H. Meyers) that offered privacy while limiting one man to one vote. (Women were denied the vote until 1920.) The advantages of Gillespie's machine over the ballot box were many, including that it kept a running count, thus speeding up the reporting of results. The machines also could be locked by officials when voting was over, preventing—or at least reducing—tampering. This extraordinary new device wowed the voters in an 1898 town election in Rochester, New York. As the *Brooklyn Eagle* reported: "Where other cities were hours and even days in counting their votes, Rochester knew the complete result in the city on every office—State, County, Assembly, Senate and Congressional—in just thirty-seven minutes. There was not a mistake, not a hitch."

Not until the 1960s did portable voting machines begin to displace the gear-and-lever behemoths (a 1960 brochure).

Gillespie's glorious gizmo, which cost $550 in 1898—equivalent to $11,600 today—was manufactured well into the 1960s, even as other systems proliferated, notably the punch-card method that introduced the term "hanging chad" into the national vocabulary.

But the booths were not embraced universally. Lawsuits filed in various states over the years claim that voting by lever does not constitute the "vote by ballot" guaranteed by the U.S. Constitution. Most jurists have held that the machines are indeed a form of paper ballot and that the secrecy the paper ballot was intended to ensure is not compromised by lever technology.

Larry Bird, curator of the NMAH exhibition, says the timing of the show is significant. "We did one in 1972, prompted by passage of the 23rd Amendment, which lowered the voting age. After the situation in Florida in the last presidential election, we wanted to tell the story again, but this time it made sense to put the machines in the foreground." One of them, the gear-and-lever machine, came to the Smithsonian in the early 1960s, a gift of the Rockwell Manufacturing Company in Jamestown, New York.

In an age of relentless obsolescence, it's a rare device that continues to give good service after a century. (If there were a museum of sheer pluck, Mr. Gillespie's invention would certainly deserve a place in its permanent collection.) But we live in an age of diminution, when smaller is often better (except, it seems, in SUVs). "The old gear-and-lever machines are built like bank vaults," Bird points out, "and weigh about as much." The expense of moving, storing and maintaining them made the machines increasingly unpopular with budget-squeezing officials. When the very portable Votomatic device—a lightweight machine, its ballot keyed to a punch card—became available, the curtained booth's days were numbered. Manufacturers stopped making spare parts in the mid-1980s. Though it's hard to argue with bottom-line reality, loss always accompanies gain. "There's a physicality to the lever-action booth," says Bird. "When you cast your vote that way, you really feel you've done something."

OWEN EDWARDS is a freelance writer based in San Francisco, California.

JOE A. GOULAIT / NATIONAL MUSEUM OF AMERICAN HISTORY, S. I.

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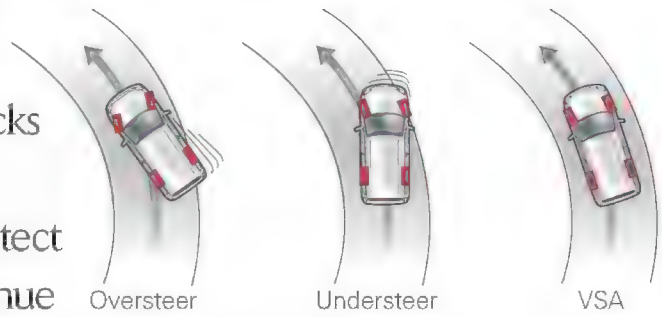

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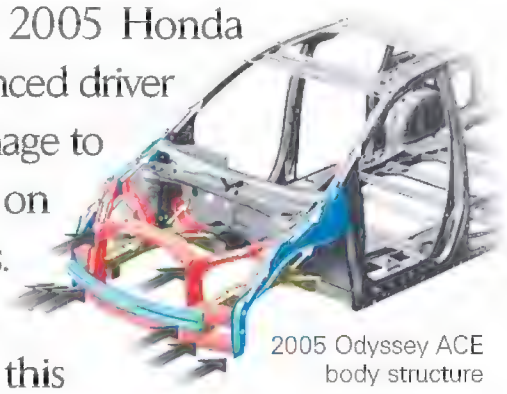

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Twin Science

Researchers make an annual pilgrimage to Twinsburg, Ohio, to study inherited traits ~ BY MARK WHEELER

IN 1819, shortly after Moses and Aaron Wilcox arrived in the tiny town of Millsville, Ohio, the identical twins struck a deal with town officials: rename the town Twinsburg in their honor, and they would donate six acres of land for a public square and throw in $20 toward a new school. Moses and Aaron were lifelong business partners, married women who were sisters, had the same number of children, contracted the same fatal disease and died within hours of each other. They were buried in the same grave, one above the other, in Twinsburg's Locust Grove Cemetery.

Today, Twinsburg is the site of the Twins Days Festival, the world's largest annual gathering of twins, with some 2,900 pairs attending this past August. Six teams of scientists showed up as well, practitioners of a research tradition that goes back to 1875, when English scientist Sir Francis Galton (Darwin's cousin) studied intelligence in twins. (His insight that twins research can reveal the heritability of certain traits is now widely admired; his enthusiasm for selective breeding to improve the human stock is not.)

Researchers study identical twins—who develop from a single egg that splits after fertilization and therefore have the same genes—to learn how genes influence traits or predispose people to disease. If research finds that identical twins who grew up in the same household (and presumably ate the same foods, went to the same schools and so forth) share a particular trait more strongly than do fraternal twins, who come from two, separately fertilized eggs and whose genes are no more alike than those of any other siblings, it suggests the similarity is due to genes rather than environment. Nature rather than nurture. A shared trait is even more striking if found in twins raised by different families.

Twin studies have shown that shyness, willingness to take risks and propensity toward holding religious beliefs are genetically inherited to some degree, as is the risk of diseases such as osteoporosis, asthma and heart disease. Twin studies have even corrected cruel misconceptions: until a 1995 study confirmed that autism was largely genetic, "a generation of women were taught that they caused the autistic behavior in their children by their distant, aloof parenting," says Robert Morell, a geneticist at the National Institutes of Health in Bethesda, Maryland.

For three years in a row, Morell and coworkers, who study hearing, have journeyed to Twinsburg. At the most recent

The Twins Days Festival can be a bit surreal for twins and non-twins alike, but the abundance of potential research subjects makes it doubly fertile for geneticists.

JONATHAN TORGOVNIK (2)

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"I feel so privileged to have been born a twin, the least I can do is help out."

conclave, they set up shop under a circus-like tent next to five other research teams. One day, twins lined up outside the tent to have their fingerprints taken, their health questioned, their sense of smell and taste examined, and the insides of their cheeks swabbed for DNA.

"There are now nearly 100 genes that are known to cause a malfunction in the ability to perceive sound," Morell said at the festival. When a sound wave travels through the ear canal, it vibrates the eardrum, which vibrates three tiny bones, which vibrate the fluid-filled cochlea. Inside the cochlea, tiny hair cells convert the pulse into an electrical signal to the brain. Morell studies the brain's act of interpreting signals from the cochlea. The brain "performs a very sophisticated processing of those signals, which allows us to identify and understand speech, even when we're also hearing traffic noise, or loud music, or"—Morell gestured to the crowd inside the tent—"a bunch of noisy scientists and twins."

The genetic contribution to such auditory processing is not well understood—and that's where the twins come in. Each participating twin puts on headphones and takes what is called a dichotic listening test. For about 45 minutes, simple words, like "house" and "spent," are transmitted simultaneously, one in each ear. The twins report which words they hear. If there is a genetic component to auditory processing, identicals should score more similarly than fraternal twins do. And if there are auditory processing genes, some researchers suggest, the genes might also contribute to learning and language disabilities. Morell's work is just beginning, but he hopes that identifying auditory processing genes will ultimately help prevent or treat hearing or learning problems in twins and non-twins (singletons) alike.

Also in the tent that day were representatives of the International Association for Identification, a nonprofit group whose members engage in forensic activities. The group was collecting fingerprints and palm prints to confirm that even those of identical twins differ. Other researchers were studying skin diseases, incontinence after giving birth and hair loss. Twins' noses wrinkled at the smell-and-taste study table, where scientists were testing genetic predilections for detecting certain herbal compounds or the bitter quinine in tonic water. A social scientist armed with a stack of surveys was even trying to determine if there is a biological influence on why some people prefer comedies to dramas, hard news to fluff, or, say, are garrulous or quiet.

One motivation for participating in the tests was money: some experiments paid $10 to $15. Other twins were simply curious about their twindom or wanted their DNA to be analyzed to confirm that they were indeed identical or fraternal twins. (Identical twins may vary considerably in appearance, while fraternals can look remarkably alike.) In the end, though, most said they were simply happy to help scientists better understand, or possibly cure, a disease. "I feel so privileged to have been born a twin, the least I can do is help out in this small way," says Stefanie Nybom from Ontario.

Twins, of course, aren't surprised that twin studies turn up an inherited component for many traits. "I think genetics plays a strong role in who we become," says Kathy (Nybom) Bateman, Stefanie's twin, who marched with her sister in the festival's traditional "Double Take" parade. "Obviously, the experiences we have shape us too, but our genetic codes really guide or govern how we react to these experiences, positively or negatively."

Not surprisingly, Stefanie agrees.

Singleton MARK WHEELER *is a freelance writer who lives in Los Angeles.*

JONATHAN TORGOVNIK (4)

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imagination at work

A New Beginning

Some 25,000 Native Americans wearing traditional regalia and representing more than 500 tribes came to Washington, D.C. for the September 21 opening of the National Museum of the American Indian. "The circle is complete," said Colorado senator Ben Nighthorse Campbell, a Northern Cheyenne. "The reemergence of the Native People has come true." The $219 million limestone structure, developed in consultation with Native leaders, is the first new museum on the National Mall since 1987. Photograph by Enrico Ferorelli. —*HELEN STARKWEATHER*

Setting Boundaries

Settling in for the long winter,
Captain Clark spells out some ground rules

One hundred seventy days into the expedition, the corps began constructing its winter quarters, near present-day Washburn, North Dakota. Neighboring Mandan Indians were frequent and welcome visitors; the soldiers went to dances and feasts in their villages and participated in buffalo hunts. Lewis and Clark would spend much of the winter preparing reports for President Jefferson and planning the rest of their trip. From the Mandan they learned that the Shoshone Indians of today's Idaho had many horses—horses the corps would need to cross the Rocky Mountains.

Two hundred years ago this month, Toussaint Charbonneau, a French-Canadian fur trader, offered his services as interpreter, and that of his two Shoshone wives. Lewis and Clark selected the teenage Sacagawea, then pregnant with her first child, to join the expedition and to help acquire horses.

November 2, 1804 [Pvt. Joseph Whitehouse]
This morning we began to build the Fort, having pleasant weather for 14 days, during which time all hands were busily employed in building of Huts to winter in, they compleated them in that time and made them comfortable to live in.

November 2 [Cpt. Meriwether Lewis]
This place we have named Fort Mandan in honour of our Neighbours.

The Indian villages surrounding Fort Mandan (above, today) boasted a population greater than St. Louis'.

November 4 [Cpt. William Clark]
A french man by Name [Charbonneau], who Speaks the Big Belley language visit us, he wished to hire & informed us his 2 Squars were Snake Indians, we [engaged] him to go on with us and take one of his wives to interpet the Snake language.

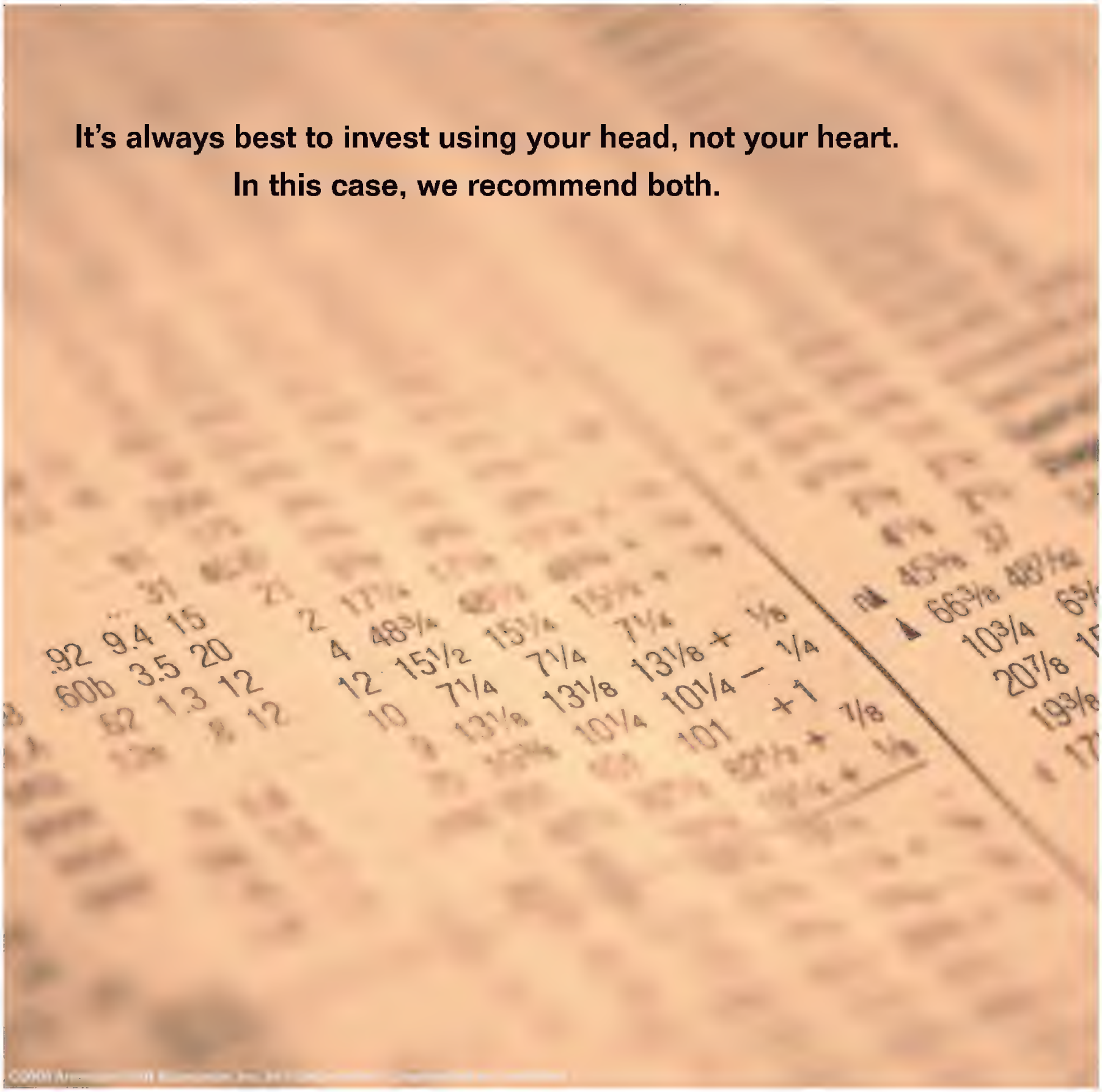
November 9 [Sgt. John Ordway]
A hard white frost last night. a clear & pleasant morning. we continued building as usal. we expect our hunters Soon as we are in Great want of fresh meat.— a nomber of the natives visits us everry day.

November 11 [Ordway]
A frenchmans Squaw came to our camp who belonged to the Snake nation. She came with our Intreperters wife & brought with them 4 buffalow Robes and Gave them to our officers. they Gave them out to the party. I Got one fine one myself.

November 20 [Ordway]
At 11 oC. a frenchman who is to be our Inter . . . arived with 4 horses loaded with peltry meat &.C. brought another of his wifes with him.

November 22 [Clark]
I was allarmed about 10 oClock by the Sentinal, who informed that an Indian was about to Kill his wife in the interpeters [hut]. . . . I went down and Spoke to the fellow about the rash act which he was like to commit and forbid any act of the kind near the fort—Some missunderstanding took place between this man & his [wife] about 8 days ago, and She came to this place, & Continued with the Squars of the interpeters, 2 days ago She returned to the Villg. in the evening of the Same day She came to the interpeters fire appearently much beat, & Stabed in 3 places— We Derected that no man of this party have any intercourse with this woman under the penelty of Punishment— he the Husband observed that one of our Serjeants Slept with his wife & if he wanted her he would give her to him, We derected the Serjeant Odway to give the man Some articles, at which time I told the Indian that I believed not one man of the party had touched his wife except the one he had given the use of her for a nite, in his own bed, no man of the party Should touch his Squar, or the wife of any Indian, nor did I believe they touch a woman if they knew her to be the wife of another man, and advised him to take his Squar home and live hapily together in future,— at this time the Grand Chief of the nation arrived, & lecturd him, and they both went off apparently [dissatisfied].

BETTMANN / CORBIS; MACDUFF EVERTON / CORBIS



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Landing Party

A Vietnam-era helicopter takes center stage in a major exhibition on U.S. wars

ON SEPTEMBER 18, 1966, forty miles northeast of Saigon, U.S. Army captain James Newman piloted a Bell UH-1 Huey helicopter low and fast along a creek bed in a bid to take much-needed supplies to an embattled infantry unit. Pvt. First Class Ed Walsh, the crew chief, was sitting behind Newman and the copilot. He remembers how a Vietcong soldier who'd been crouching in the brush stood up and emptied his AK-47 assault rifle into the Huey. Bullets tore into the captain's left foot, and the helicopter pitched toward the ground. The copilot grabbed the controls, preventing catastrophe. Walsh wrapped his belt around the captain's leg to staunch the hemorrhaging.

"Ed saved my life, no question," says Newman, who underwent five major surgeries before serving another tour in Vietnam. But he never had the chance to thank Walsh—until this past summer. They were reunited after the Huey they flew, *Robinhood 091*, was chosen for the National Museum of American History's new exhibition, "The Price of Freedom: Americans at War." It opens on Veterans Day.

The Smithsonian acquired the helicopter from the Texas Air Command Museum in Forth Worth. Walsh, now 58 and a retired building manager in Springfield, Massachusetts, accompanied the Huey on a 20-site, five-week tour that ended in March when the craft landed on the National Mall.

"The Huey is perhaps the most powerful symbol of the Vietnam War," says curator David Allison. It was the first

"There are far fewer names on the Vietnam Memorial wall because of the Huey" (on the Mall), says Walsh (top, in Vietnam, 1966).

ED WALSH COLLECTION; DANE PENLAND

AMERICA'S WARS

1750

French and Indian War (1754-1763): Indians allied with France attacked colonial settlements as Britain and France vied for North American lands. Britain won; English would be spoken in the future U.S.

Revolutionary War (1775-1783): Colonists clashed with British troops (the 1770 Boston Massacre) and formed a new nation. 4,435 Americans died in battle, another 18,500 of wounds and sickness.

1800

War of 1812 (1812-1814): Angered by British impressment of American seamen, the U.S. declared a war that ended in stalemate, though the USS *Constitution*, on right, trounced the British frigate *Guerriére* in 1812.

Eastern Indian Wars (1636-1838): Westward expansion by European settlers met Indian resistance, fueling chronic warfare. By 1812, with Chief Tecumseh's tribal alliance crushed, U.S. policy forced tribes west of the Mississippi.

1850

Mexican War (1846-1848): A border dispute with Mexico—after 189 Texans were killed at the Alamo (left) in 1836—ignited a war that ended with the U.S. purchase of more than half of Mexico's territory for a mere $15 million.

Civil War (1861-1865): Sparked by the secession of 11 Southern states, the fratricidal war cost the Confederacy and the Union $58 billion in 2003 dollars and some 780,000 casualties, with 498,000 deaths.

Western Indian Wars (1865-1890): Battles between Western tribes and U.S. troops ended with the 1886 surrender of Apache leader Geronimo (right) in Arizona and the 1890 defeat of the Sioux at Wounded Knee in South Dakota.

1900

Spanish-American War (1898): After the USS *Maine* blew up inexplicably in Spanish Cuba, U.S. warships pressured Spain to renounce its claim to Cuba and, for $20 million, cede control of Guam, Puerto Rico and the Philippines.

major U.S. conflict in which helicopters played a central role, transporting the wounded from the front lines to hospitals. The *whop-whop-whop* of the Huey's rotor blades often signaled salvation to besieged troops. "There are far fewer names on the wall of the Vietnam War Memorial because of the Huey," says Walsh. Bell Aircraft produced more than 16,000 Hueys from 1959 to 1978, when the Army replaced the helicopter with the Sikorsky UH-60 Black Hawk.

As Walsh traveled cross-country with the Huey, many Vietnam veterans and others told him that helicopter crews had saved them or their loved ones. Their comments, he says, served as the warm welcome home that he never had after the war.

Walsh, left, and Newman were reunited this year.

Walsh had long wanted to reach the pilot he'd served with 38 years ago. After the museum selected the Huey, another Vietnam veteran called Walsh with Newman's address. The two met up this past August in North Carolina. Their next mission: to learn the name of the copilot who grabbed the rudder that fateful day and saved the craft from plunging to the ground. "If anyone knows who he is," Newman says, "let us know." —*JOHN F. ROSS*

Honoring Courage

General Washington created it but didn't call it the Purple Heart

"WHENEVER any singularly meritorious action is performed," Gen. George Washington ordered in August 1782, "the author of it shall be permitted to wear on his facings, over his left breast, the figure of a heart in purple cloth." The following May, in the closing months of the Revolutionary War, Washington awarded such a heart-shaped emblem to Sgt. Elijah Churchill of Connecticut for two courageous acts. The Badge of Military Merit, America's first military decoration, would be awarded a few weeks later to two other Continental Army soldiers.

Then, on the bicentennial of Washington's birth in 1932, the U.S. War Department revived the award, renaming it the Purple Heart and expanding the criteria to honor those wounded or killed in service. It was also made retroactive. Maj. Gen. Douglas MacArthur received Purple Heart No. 1 for wounds he received in World War I. It was then that the medal assumed the form it has today: a bronze heart with a purple center bearing Washington's silhouette.

The badge awarded in 1783 to Churchill (top) was fabric; today's is bronze.

Why purple? Washington's reasoning isn't known, says scholar Jack Warren of the Society of the Cincinnati, a group of descendants of Washington's officers. But by selecting a color associated with royalty, Warren says, "Washington made clear that the common soldier could ascend to a dignity once reserved for kings." —*MICHELLE CUTHRELL*

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AMERICA'S WARS

(Continued from page 40)

World War I (1914-1918): The U.S., which entered the war in 1917 and clinched the Allied victory over the Central Powers (doughboys in France), spent $317 billion and lost 116,708 troops.

World War II (1939-1945): The once-isolationist U.S joined the war in 1941 (Helldivers on patrol) and suffered some 1,078,000 casualties, including 405,399 deaths.

The Cold War (1945-1991): Rivalry between the U.S. and the Soviet Union fed the space race and a high-stakes nuclear arms buildup, climaxing with the 1962 Cuban missile crisis and ending with the USSR's collapse.

1950

Korean War (1950-1953): U.N.-backed U.S. and South Korean forces fought to repel the Soviet- and Chinese-sponsored North Korean invaders; some 103,000 Americans were wounded and 37,000 killed.

Vietnam War (1955-1975): The U.S., supporting South Vietnam against the Communist North, sent 3.1 million troops to the region; some 58,000 were lost, 300,000 wounded.

Persian Gulf War (1991): Iraq's annexing of Kuwait prompted a U.N.-backed, U.S.-led bombardment and ground offensive that liberated the sheikdom (U.S. general H. Norman Schwartzkopf in 1991). Some 400 U.S. troops were killed.

2000

War in Afghanistan (2001-2002): In the wake of the September 11, 2001, terrorist attacks and Afghanistan's refusal to turn over to the U.S. Osama bin Laden, U.S.-led forces toppled the ruling Taliban. Some 18,000 U.S. troops remain in Afghanistan.

War in Iraq: U.S.-led forces intent on regime change invaded in March 2003; Baghdad fell in April, Hussein was captured in December. More than 1,000 U.S. troops have died, and 135,000 are still deployed there.

Not Legal Tender

A defunct bill and certificate are remnants of Saddam's reign

Old currency (top) was replaced and the Ba'ath Party (below, a Ba'ath certificate) banned.

TWO OF THE ITEMS from Iraq in the new exhibit on U.S. wars aren't worth the paper they're printed on—if you don't count the price they may fetch at auction.

One is the dinar, which, like all Iraqi currency under Saddam Hussein, displayed the dictator's likeness. Since this past January, when the Coalition Provisional Authority introduced a new currency—it bears symbols of Iraqi heritage, such as the Spiral Minaret in Samarra—the Saddam-bearing notes have become collectibles that can be purchased on the Web auction site eBay and elsewhere.

The other obsolete Iraqi document on display is a certificate of membership in the Ba'ath Party. Its members ruled Iraq beginning in 1963 and were complicit in Hussein's brutal 25-year reign. Government officials under Hussein had to belong to the Ba'ath Party, which coalition authorities banned in June 2003.

Artifacts of the ousted regime that are worthless in Iraq can be invaluable to scholars and others. "What appears on money and official documents," says Smithsonian curator David Allison, "communicates a powerful message about a nation's sovereignty, principles and ideals." —*JOHN F. ROSS*

CHRONICLING U.S. WARS

The Smithsonian Institution's first comprehensive look at military conflicts that have shaped U.S. history opens on Veterans Day, November 11, at the National Museum of American History. The permanent exhibition, which was conceived in February 2004, covers 16 wars—from the 18th century's French and Indian War from 1754 to 1763 to today's conflict in Iraq—and presents more than 800 historic artifacts. The title, "The Price of Freedom: Americans at War," "reflects the impact of war on citizen soldiers—average men and women who serve their country—as well as on their families and communities," says museum director Brent Glass. A companion book (published by Marquand Books) is scheduled for release this month.

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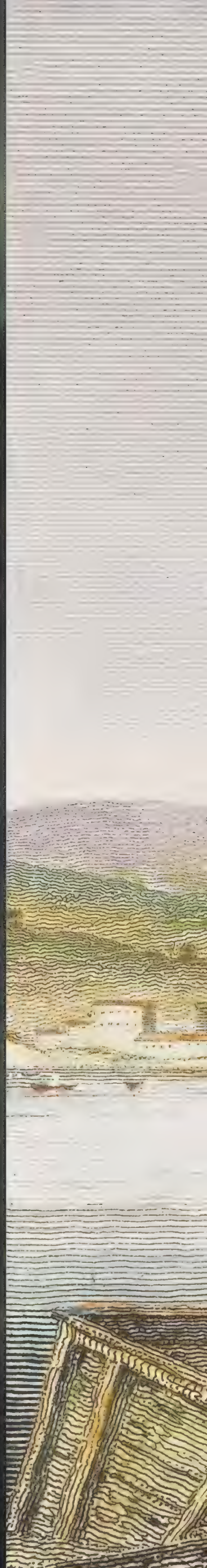


As he contemplated seeking the presidency in 1800, Jefferson (in Virginia that year) declared himself reluctant to depart his beloved Monticello for the fractious political scene in Washington (in an 1800 view, right). Yet he soon showed an appetite for the fray, claiming his incumbent opponents had perpetrated a "reign of witches."

THE ELECTION OF 1800

Cliffhanger

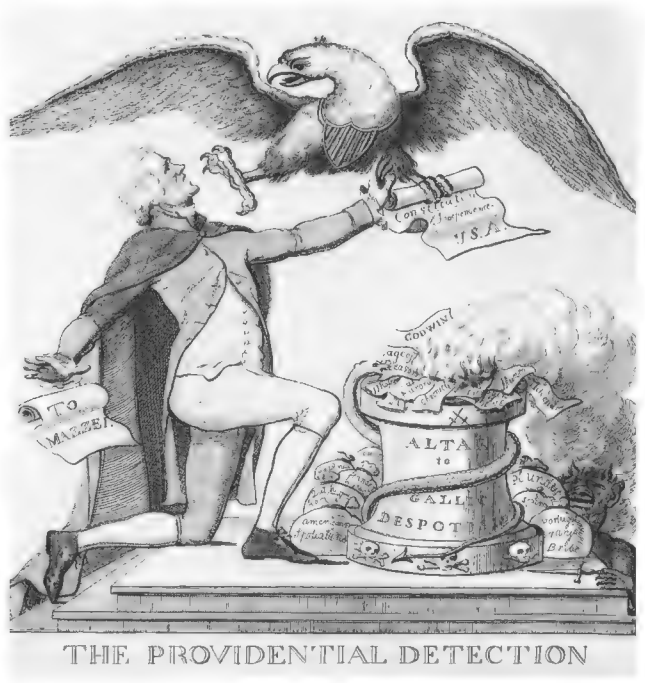
Presidential candidates Thomas Jefferson and Aaron Burr were deadlocked in the House of Representatives with no majority for either. For seven days, as they maneuvered and schemed, the fate of the young republic hung in the ballots

BY JOHN FERLING

On the afternoon of September 23, 1800, Vice President Thomas Jefferson, from his Monticello home, wrote a letter to Benjamin Rush, the noted Philadelphia physician. One matter dominated Jefferson's thoughts: that year's presidential contest. Indeed, December 3, Election Day—the date on which the Electoral College would meet to vote—was only 71 days away.

Jefferson was one of four presidential candidates. As he composed his letter to Rush, Jefferson paused from time to time to gather his thoughts, all the while gazing absently through an adjacent window at the shimmering heat and the foliage, now a lusterless pale green after a long, dry summer. Though he hated leaving his hilltop plantation and believed, as he told Rush, that gaining the presidency would make him "a constant butt for every shaft of calumny which malice & falsehood could form," he nevertheless sought the office "with sincere zeal."

He had been troubled by much that had occurred in incumbent John Adams' presidency and was convinced that radicals within Adams' Federalist Party were waging war against what he called the "spirit of 1776"—goals the American people had hoped to attain through the Revolution. He had earlier characterized Federalist rule as a "reign of witches," insisting that the party was "adverse to liberty" and "calculated to undermine and demolish the republic." If the Federalists prevailed, he believed, they would destroy the states and create a national government every bit as oppressive as that which Great Britain had tried to impose on the colonists before 1776.



THE PROVIDENTIAL DETECTION

A primary mudslinging vehicle of the day was the political cartoon (an avenging Federalist eagle of 1800 prevents the pro-French Jefferson from desecrating the Constitution). One newspaper claimed that the election of Jefferson would spell "irretrievable ruin."

The "revolution . . . of 1776," Jefferson would later say, had determined the "form" of America's government; he believed the election of 1800 would decide its "principles." "I have sworn upon the altar of God eternal hostility against every form of tyranny over the mind of Man," he wrote.

Jefferson was not alone in believing that the election of 1800 was crucial. On the other side, Federalist Alexander Hamilton, who had been George Washington's secretary of treasury, believed that it was a contest to save the new nation from "the fangs of Jefferson." Hamilton agreed with a Federalist newspaper essay that argued defeat meant "happiness, constitution and laws [faced] endless and irretrievable ruin." Federalists and Republicans appeared to agree on one thing only: that the victor in 1800 would set America's course for generations to come, perhaps forever.

Only a quarter of a century after the signing of the Declaration of Independence, the first election of the new 19th century was carried out in an era of intensely emotional partisanship among a people deeply divided over the scope of the government's authority. But it was the French Revolution that had imposed a truly hyperbolic quality upon the partisan strife.

That revolution, which had begun in 1789 and did not run its course until 1815, deeply divided Americans. Conservatives, horrified by its violence and social leveling, applauded Great Britain's efforts to stop it. The most conservative Americans, largely Federalists, appeared bent on an alliance with London that would restore the ties between America and Britain that had been severed in 1776. Jeffersonian Republicans, on the other hand, insisted that these radical conservatives wanted to turn back the clock to reinstitute much of the British colonial template. (Today's Republican Party traces its origins not to Jefferson and his allies but to the party formed in 1854-1855, which carried Lincoln to the presidency in 1860.)

A few weeks before Adams' inauguration in 1796, France, engaged in an all-consuming struggle with England for world domination, had decreed that it would not permit America to trade with Great Britain. The French Navy soon swept American ships from the seas, idling port-city workers and plunging the economy toward depression. When Adams sought to negotiate a settlement, Paris spurned his envoys.

Adams, in fact, hoped to avoid war, but found himself rid-

Historian JOHN FERLING *is the author of* Adams vs. Jefferson: The Tumultuous Election of 1800 (*Oxford University Press*).

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ing a whirlwind. The most extreme Federalists, known as Ultras, capitalized on the passions unleashed in this crisis and scored great victories in the off-year elections of 1798, taking charge of both the party and Congress. They created a provisional army and pressured Adams into putting Hamilton in charge. They passed heavy taxes to pay for the army and, with Federalist sympathizers in the press braying that "traitors must be silent," enacted the Alien and Sedition Acts, which provided jail terms and exorbitant fines for anyone who uttered or published "any false, scandalous, and malicious" statement against the United States government or its officials. While Federalists defended the Sedition Act as a necessity in the midst of a grave national crisis, Jefferson and his followers saw it as a means of silencing Republicans—and a violation of the Bill of Rights. The Sedition Act, Jefferson contended, proved there was no step, "however atrocious," the Ultras would not take.

electoral votes, the House of Representatives "shall chuse by Ballot one of them for President." Unlike today, each party nominated two candidates for the presidency.

Federalist congressmen had caucused that spring and, without indicating a preference, designated Adams and South Carolina's Charles Cotesworth Pinckney as the party's choices. Adams desperately wanted to be re-elected. He was eager to see the French crisis through to a satisfactory resolution and, at age 65, believed that a defeat would mean he would be sent home to Quincy, Massachusetts, to die in obscurity. Pinckney, born into Southern aristocracy and raised in England, had been the last of the four nominees to come around in favor of American independence. Once committed, however, he served valiantly, seeing action at Brandywine, Germantown and Charleston. Following the war, he sat in the Constitutional Convention; both Washington and Adams had sent him to France on diplomatic missions.

Even before the parties chose candidates (from left, Republicans Aaron Burr and Thomas Jefferson; Federalists John Adams and Charles Pinckney), Abigail Adams feared that the campaign could "corrupt the minds and morals of the best people in the world."

All along, Jefferson had felt that Federalist extremists might overreach. By early 1799, Adams himself had arrived at the same conclusion. He, too, came to suspect that Hamilton and the Ultras wanted to precipitate a crisis with France. Their motivation perhaps had been to get Adams to secure an alliance with Great Britain and accept the Ultras' program in Congress. But avowing that there "is no more prospect of seeing a French Army here, than there is in Heaven," Adams refused to go along with the scheme and sent peace envoys to Paris. (Indeed, a treaty would be signed at the end of September 1800.)

It was in this bitterly partisan atmosphere that the election of 1800 was conducted. In those days, the Constitution stipulated that each of the 138 members of the Electoral College cast two votes for president, which allowed electors to cast one vote for a favorite son and a second for a candidate who actually stood a chance of winning. The Constitution also stipulated that if the candidates tied, or none received a majority of

In addition to Jefferson, Republicans chose Aaron Burr as their candidate, but designated Jefferson as the party's first choice. Jefferson had held public office intermittently since 1767, serving Virginia in its legislature and as a wartime governor, sitting in Congress, crossing to Paris in 1784 for a five-year stint that included a posting as the American minister to France, and acting as secretary of state under Washington. His second place finish in the election of 1796 had made him vice president, as was the custom until 1804. Burr, at age 44 the youngest of the candidates, had abandoned his legal studies in 1775 to enlist in the Continental Army; he had experienced the horrors of America's failed invasion of Canada and the miseries of Valley Forge. After the war he practiced law and represented New York in the U.S. Senate. In 1800, he was serving as a member of the New York legislature.

In those days, the Constitution left the manner of selecting presidential electors to the states. In 11 of the 16 states, state legislatures picked the electors; therefore, the party

GRANGER COLLECTION (2); NATIONAL PORTRAIT GALLERY, SMITHSONIAN INSTITUTION / ART RESOURCE, N.Y. (2)

that controlled the state assembly garnered all that state's electoral votes. In the other five states, electors were chosen by "qualified" voters (white, male property owners in some states, white male taxpayers in others). Some states used a winner-take-all system: voters cast their ballots for the entire slate of Federalist electors or for the Republican slate. Other states split electors among districts.

Presidential candidates did not kiss babies, ride in parades or shake hands. Nor did they even make stump speeches. The candidates tried to remain above the fray, leaving campaigning to surrogates, particularly elected officials from within their parties. Adams and Jefferson each returned home when Congress adjourned in May, and neither left their home states until they returned to the new capital of Washington in November.

But for all its differences, much about the campaign of 1800 was recognizably modern. Politicians carefully weighed which procedures were most likely to advance their party's interests. Virginia, for instance, had permitted electors to be elected from districts in three previous presidential contests, but after Federalists carried 8 of 19 congressional districts in the elections of 1798, Republicans, who controlled the state assembly, switched to the winner-take-all format, virtually guaranteeing they would get every one of Virginia's 21 electoral votes in 1800.

At the Capitol (today's Senate wing, in 1800), the attempt to break the House of Representatives deadlock went on for seven days and 36 ballots. President Adams feared that the nation had arrived at a "precipice" and that "a civil war was expected."

The ploy was perfectly legal, and Federalists in Massachusetts, fearing an upsurge in Republican strength, scuttled district elections—which the state had used previously—to select electors by the legislature, which they controlled.

Though the contest was played out largely in the print media, the unsparing personal attacks on the character and temperament of the nominees resembled the studied incivility to which today's candidates are accustomed on television. Adams was portrayed as a monarchist who had turned his back on republicanism; he was called senile, a poor judge of character, vain, jealous and driven by an "ungovernable temper." Pinckney was labeled a mediocrity, a man of "limited talents" who was "illy suited to the exalted station" of the presidency. Jefferson was accused of cowardice. Not only, said his critics, had he lived in luxury at Monticello while others sacrificed during the War of Independence, but he had fled like a jack rabbit when British soldiers raided Charlottesville in 1781. And he had failed egregiously as Virginia's governor, demonstrating that his "nerves are too weak to bear anxiety and difficulties." Federalists further insisted Jefferson had been transformed into a dangerous radical during his residence in France and was a "howling atheist." For his part, Burr was depicted as without principles, a man who would do anything to get his hands on power.

Also like today, the election of 1800 seemed to last forever. "Electioneering is already begun," the first lady, Abigail Adams, noted 13 months before the Electoral College was to meet. What made it such a protracted affair was that state legislatures were elected throughout the year; as these assemblies more often than not chose presidential electors, the state contests to determine them became part of the national campaign. In 1800 the greatest surprise among these contests occurred in New York, a large, crucial state that had given all 12 of its electoral votes to Adams in 1796, allowing him to eke out a three-vote victory over Jefferson.

The battle for supremacy in the New York legislature had hinged on the outcome in New York City. Thanks largely to lopsided wins in two working-class wards where many voters owned no property, the Republicans secured all 24 of New York's electoral votes for Jefferson and Burr. For Abigail Adams, that was enough to seal Adams' fate. John Dawson, a Republican congressman from Virginia, declared: "The Republic is safe. . . . The [Federalist] party are in rage & despair."

But Adams himself refused to give up hope. After all, New England, which accounted for nearly half the electoral votes needed for a majority, was solidly in his camp, and he felt certain he would win some votes elsewhere. Adams believed that if he could get South Carolina's eight votes, he would be virtually certain to garner the same number of electoral votes that had put him over the top four years earlier. And, at first, both parties were thought to have a shot at carrying the state.

When South Carolina's legislature was elected in mid-October, the final tally revealed that the assembly was about evenly divided between Federalists and Republicans—though unaffiliated representatives, all pro-Jefferson, would determine the outcome. Now Adams' hopes were fading fast. Upon hearing the news that Jefferson was assured of South Carolina's eight votes, Abigail Adams remarked to her son Thomas that the "consequence to us personally is that we re-

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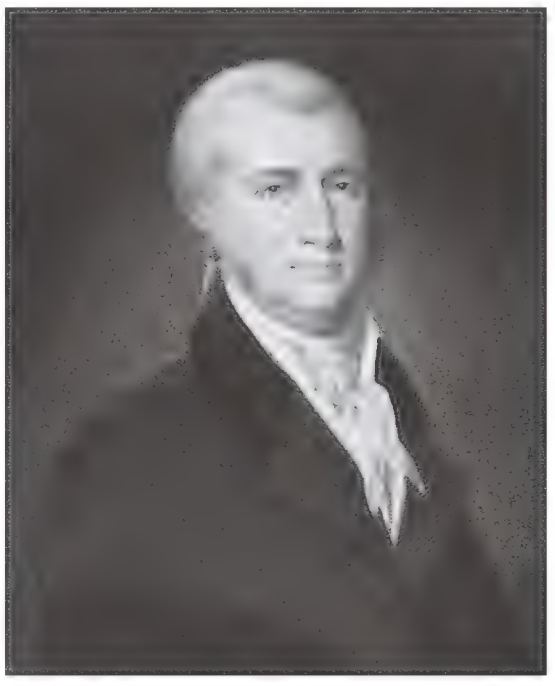
tire from public life." All that remained to be determined was whether the assembly would instruct the electors to cast their second vote for Burr or Pinckney.

The various presidential electors met in their respective state capitals to vote on December 3. By law, their ballots were not to be opened and counted until February 11, but the outcome could hardly be kept secret for ten weeks. Sure enough, just nine days after the vote, Washington, D.C.'s *National Intelligencer* newspaper broke the news that neither Adams nor Pinckney had received a single South Carolina vote and, in the voting at large, Jefferson and Burr had each received 73 electoral votes. Adams had gotten 65, Pinckney 64. The House of Representatives would have to make the final decision between the two Republicans.

Adams thus became the first presidential candidate to fall victim to the notorious clause in the Constitution that counted each slave as three-fifths of one individual in calculating population used to allocate both House seats and electoral votes. Had slaves, who had no vote, not been so counted, Adams would have edged Jefferson by a vote of 63 to 61. In addition, the Federalists fell victim to the public's perception that the Republicans stood for democracy and egalitarianism, while the Federalists were seen as imperious and authoritarian.



The outcome hinged on an ingenious solution by Delaware's lone congressman, James Bayard. He abstained—giving Jefferson a one-vote majority—most likely out of what Bayard termed the "imperious necessity" of preventing the nation's dissolution.

In the House, each state would cast a single vote. If each of the 16 states voted—that is, if none abstained—9 states would elect the president. Republicans controlled eight delegations—New York, New Jersey, Pennsylvania, Virginia, North Carolina, Georgia, Kentucky and Tennessee. The Federalists held six: New Hampshire, Massachusetts, Rhode Island, Connecticut, Delaware and South Carolina. And two delegations—Maryland and Vermont—were deadlocked.

Though Jefferson and Burr had tied in the Electoral College, public opinion appeared to side with Jefferson. Not only had he been the choice of his party's nominating caucus, but he had served longer at the national level than Burr, and in a more exalted capacity. But if neither man was selected by noon on March 4, when Adams' term ended, the country would be without a chief executive until the newly elected Congress convened in December, nine months later. In the interim, the current, Federalist-dominated Congress would be in control.

Faced with such a prospect, Jefferson wrote to Burr in December. His missive was cryptic, but in it he appeared to suggest that if Burr accepted the vice presidency, he would be given greater responsibilities than previous vice presidents. Burr's response to Jefferson was reassuring. He pledged to "disclaim all competition" and spoke of "your administration."

Meanwhile, the Federalists caucused to discuss their options. Some favored tying up the proceedings in order to hold on to power for several more months. Some wanted to try to invalidate, on technical grounds, enough electoral votes to make Adams the winner. Some urged the party to throw its support to Burr, believing that, as a native of mercantile New York City, he would be more friendly than Jefferson to the Federalist economic program. Not a few insisted that the party should support Jefferson, as he was clearly the popular choice. Others, including Hamilton, who had long opposed Burr in the rough and tumble of New York City politics, thought Jefferson more trustworthy than Burr. Hamilton argued that Burr was "without Scruple," an "unprincipled . . . voluptuary" who would plunder the country. But Hamilton also urged the party to stall, in the hope of inducing Jefferson to make a deal. Hamilton proposed that in return for the Federalist votes that would make him president, Jefferson should promise to preserve the Federalist fiscal system (a properly funded national debt and the Bank), American neutrality and a strong navy, and to agree to "keeping in office all our Foederal Friends" below the cabinet level. Even Adams joined the fray, telling Jefferson that the presidency would be his "in an instant" should he accept Hamilton's terms. Jefferson declined, insisting that he "should never go into the office of President . . . with my hands tied by any conditions which should hinder me from pursuing the measures" he thought best.

In the end, the Federalists decided to back Burr. Hearing of their decision, Jefferson told Adams that any attempt "to defeat the Presidential election" would "produce resistance by force, and incalculable consequences."

Burr, who had seemed to disavow a fight for the highest office, now let it be known that he would accept the presidency if elected by the House. In Philadelphia, he met with several Republican congressmen, allegedly telling them that he intended to fight for it.

Burr had to know that he was playing a dangerous game and risking political suicide by challenging Jefferson, his party's reigning power. The safest course would have been to acquiesce to the vice presidency. He was yet a young man, and given Jefferson's penchant for retiring to Monticello—he had done so in 1776, 1781 and 1793—there was a good chance that Burr would be his party's standard-bearer as early

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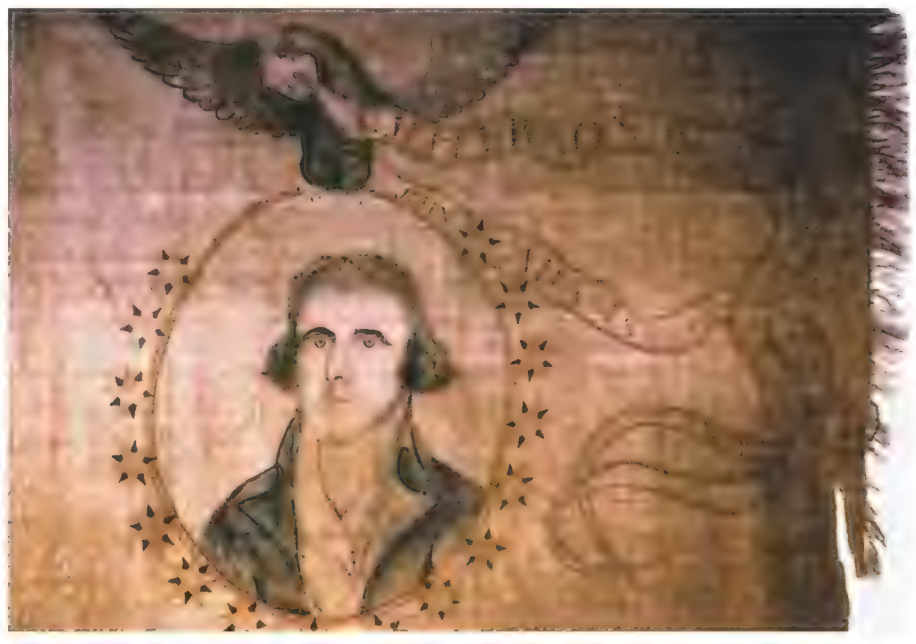
as 1804. But Burr also knew there was no guarantee he would live to see future elections. His mother and father had died at ages 27 and 42, respectively.

Burr's was not the only intrigue. Given the high stakes, every conceivable pressure was applied to change votes. Those in the deadlocked delegations were courted daily, but no one was lobbied more aggressively than James Bayard, Delaware's lone congressman, who held in his hands the sole determination of how his state would vote. Thirty-two years old in 1800, Bayard had practiced law in Wilmington before winning election to the House as a Federalist four years earlier. Bayard despised Virginia's Republican planters, including Jefferson, whom he saw as hypocrites who owned hundreds of slaves and lived "like feudal barons" as they played the role of "high priests of liberty." He announced he was supporting Burr.

THE CITY OF Washington awoke to a crippling snowstorm Wednesday, February 11, the day the House was to begin voting. Nevertheless, only one of the 105 House members did not make it in to Congress, and his absence would not change his delegation's tally. Voting began the moment the House was gaveled into session. When the roll call was complete, Jefferson had carried eight states, Burr six, and two deadlocked states had cast uncommitted ballots; Jefferson still needed one more vote for a majority. A second vote was held, with a similar tally, then a third. When at 3 a.m. the exhausted congressmen finally called it a day, 19 roll calls had been taken, all with the same inconclusive result.



Once Jefferson's victory (trumpeted in a post-election banner) was assured, the transfer of power occurred smoothly. A defeated Adams said he had wearied of Washington and looked forward to escaping "all intrigues, and passions that agitate the world."

By Saturday evening, three days later, the House had cast 33 ballots. The deadlock seemed unbreakable.

For weeks, warnings had circulated of drastic consequences if Republicans were denied the presidency. Now that danger seemed palpable. A shaken President Adams was certain the two sides had come to the "precipice" of disaster and that "a civil war was expected." There was talk that Virginia would secede if Jefferson were not elected. Some Republicans declared they would convene another constitutional convention to restructure the federal government so that it reflected the "democratical spirit of America." It was rumored that a mob had stormed the arsenal in Philadelphia and was preparing to march on Washington to drive the defeated Federalists from power. Jefferson said he could not restrain those of his supporters who threatened "a dissolution" of the Union. He told Adams that many Republicans were prepared to use force to prevent the Federalists' "legislative usurpation" of the executive branch.

In all likelihood, it was these threats that ultimately broke the deadlock. The shift occurred sometime after Saturday's final ballot; it was Delaware's Bayard who blinked. That night, he sought out a Republican close to Jefferson, almost certainly John Nicholas, a member of Virginia's House delegation. Were Delaware to abstain, Bayard pointed out, only 15 states would ballot. With eight states already in his column, Jefferson would have a majority and the elusive victory at last. But in return, Bayard asked, would Jefferson accept the terms that the Federalists had earlier proffered? Nicholas responded, according to Bayard's later recollections, that these conditions were "very reasonable" and that he could vouch for Jefferson's acceptance.

The Federalists caucused behind doors on Sunday afternoon, February 15. When Bayard's decision to abstain was announced, it touched off a firestorm. Cries of "Traitor! Traitor!" rang down on him. Bayard himself later wrote that the "clamor was prodigious, the reproaches vehement," and that many old colleagues were "furious" with him. Two matters in particular roiled his comrades. Some were angry that Bayard had broken ranks before it was known what kind of deal, if any, Burr might have been willing to cut. Others were upset that nothing had been heard from Jefferson himself. During a second Federalist caucus that afternoon, Bayard agreed to take no action until Burr's answer was known. In addition, the caucus directed Bayard to seek absolute assurances that Jefferson would go along with the deal.

Early the next morning, Monday, February 16, according to Bayard's later testimony, Jefferson made it known through a third party that the terms demanded by the Federalists "corresponded with his views and intentions, and that we might confide in him accordingly." The bargain was struck, at least to Bayard's satisfaction. Unless Burr offered even better terms, Jefferson would be the third president of the United States.

At some point that Monday afternoon, Burr's letters arrived. What exactly he said or did not say in them—they

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BRIEF SUMMARY Before prescribing NEXIUM, please see full Prescribing Information. **INDICATIONS AND USAGE** NEXIUM is indicated for the short-term treatment (4 to 8 weeks) in the healing and symptomatic resolution of diagnostically confirmed erosive esophagitis. **CONTRAINDICATIONS** NEXIUM is contraindicated in patients with known hypersensitivity to any component of the formulation or to substituted benzimidazoles. **PRECAUTIONS** Symptomatic response to therapy with NEXIUM does not preclude the presence of gastric malignancy. Atrophic gastritis has been noted occasionally in gastric corpus biopsies from patients treated long-term with omeprazole, of which NEXIUM is an enantiomer. **Information for Patients** NEXIUM Delayed-Release Capsules should be taken at least one hour before meals. For patients who have difficulty swallowing capsules, one tablespoon of applesauce can be added to an empty bowl and the NEXIUM Delayed-Release Capsule can be opened, and the pellets carefully emptied onto the applesauce. The pellets should be mixed with the applesauce and then swallowed immediately. The applesauce used should not be hot and should be soft enough to be swallowed without chewing. The pellets should not be chewed or crushed. The pellet/applesauce mixture should not be stored for future use. Antacids may be used while taking NEXIUM. **Drug Interactions** Esomeprazole is extensively metabolized in the liver by CYP2C19 and CYP3A4. *In vitro* and *in vivo* studies have shown that esomeprazole is not likely to inhibit CYPs 1A2, 2A6, 2C9, 2D6, 2E1 and 3A4. No clinically relevant interactions with drugs metabolized by these CYP enzymes would be expected. Drug interaction studies have shown that esomeprazole does not have any clinically significant interactions with phenytoin, warfarin, quinidine, clarithromycin or amoxicillin. Post-marketing reports of changes in prothrombin measures have been received among patients on concomitant warfarin and esomeprazole therapy. Increases in INR and prothrombin time may lead to abnormal bleeding and even death. Patients treated with proton pump inhibitors and warfarin concomitantly may need to be monitored for increases in INR and prothrombin time. Esomeprazole may potentially interfere with CYP2C19, the major esomeprazole metabolizing enzyme. Coadministration of esomeprazole 30 mg and diazepam, a CYP2C19 substrate, resulted in a 45% decrease in clearance of diazepam. Increased plasma levels of diazepam were observed 12 hours after dosing and onwards. However, at that time, the plasma levels of diazepam were below the therapeutic interval, and thus this interaction is unlikely to be of clinical relevance. Esomeprazole inhibits gastric acid secretion. Therefore, esomeprazole may interfere with the absorption of drugs where gastric pH is an important determinant of bioavailability (eg, ketoconazole, iron salts and digoxin). Coadministration of oral contraceptives, diazepam, phenytoin or quinidine did not seem to change the pharmacokinetic profile of esomeprazole. **Carcinogenesis, Mutagenesis, Impairment of Fertility** The carcinogenic potential of esomeprazole was assessed using omeprazole studies. In two 24-month oral carcinogenicity studies in rats, omeprazole at daily doses of 1.7, 3.4, 13.8, 44.0 and 140.8 mg/kg/day (about 0.7 to 57 times the human dose of 20 mg/day expressed on a body surface area basis) produced gastric ECL cell carcinoids in a dose-related manner in both male and female rats, the incidence of this effect was markedly higher in female rats, which had higher blood levels of omeprazole. Gastric carcinoids seldom occur in the untreated rat. In addition, ECL cell hyperplasia was present in all treated groups of both sexes. In one of these studies, female rats were treated with 13.8 mg omeprazole/kg/day (about 5.6 times the human dose on a body surface area basis) for 1 year, then followed for an additional year without the drug. No carcinoids were seen in these rats. An increased incidence of treatment-related ECL cell hyperplasia was observed at the end of 1 year (94% treated vs 10% controls). By the second year the difference between treated and control rats was much smaller (46% vs 26%) but still showed more hyperplasia in the treated group. Gastric adenocarcinoma was seen in one rat (2%). No similar tumor was seen in male or female rats treated for 2 years. For this strain of rat no similar tumor has been noted historically, but a finding involving only one tumor is difficult to interpret. A 78-week mouse carcinogenicity study of omeprazole did not show increased tumor occurrence, but the study was not conclusive. Esomeprazole was negative in the Ames mutation test, in the *in vivo* rat bone marrow cell chromosome aberration test, and the *in vivo* mouse micronucleus test. Esomeprazole, however, was positive in the *in vitro* human lymphocyte chromosome aberration test. Omeprazole was positive in the *in vitro* human lymphocyte chromosome aberration test, the *in vivo* mouse bone marrow cell chromosome aberration test, and the *in vivo* mouse micronucleus test. The potential effects of esomeprazole on fertility and reproductive performance were assessed using omeprazole studies. Omeprazole at oral doses up to 138 mg/kg/day in rats (about 56 times the human dose on a body surface area basis) was found to have no effect on reproductive performance of parental animals. **Pregnancy** *Teratogenic Effects. Pregnancy Category B*—Teratology studies have been performed in rats at oral doses up to 280 mg/kg/day (about 57 times the human dose on a body surface area basis) and in rabbits at oral doses up to 86 mg/kg/day (about 35 times the human dose on a body surface area basis) and have revealed no evidence of impaired fertility or harm to the fetus due to esomeprazole. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed. Teratology studies conducted with omeprazole in rats at oral doses up to 138 mg/kg/day (about 56 times the human dose on a body surface area basis) and in rabbits at doses up to 69 mg/kg/day (about 56 times the human dose on a body surface area basis) did not disclose any evidence for a teratogenic potential of omeprazole. In rabbits, omeprazole in a dose range of 6.9 to 69.1 mg/kg/day (about 5.5 to 56 times the human dose on a body surface area basis) produced dose-related increases in embryo-lethality, fetal resorptions, and pregnancy disruptions. In rats, dose-related embryo/fetal toxicity and postnatal developmental toxicity were observed in offspring resulting from parents treated with omeprazole at 13.8 to 138.0 mg/kg/day (about 5.6 to 56 times the human doses on a body surface area basis). There are no adequate and well-controlled studies in pregnant women. Sporadic reports have been received of congenital abnormalities occurring in infants born to women who have received omeprazole during pregnancy. **Nursing Mothers** The excretion of esomeprazole in milk has not been studied. However, omeprazole concentrations have been measured in breast milk of a woman following oral administration of 20 mg. Because esomeprazole is likely to be excreted in human milk because of the potential for serious adverse reactions in nursing infants from esomeprazole, and because of the potential for tumorigenicity shown for omeprazole in rat carcinogenicity studies, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother. **Pediatric Use** Safety and effectiveness in pediatric patients have not been established. **Geriatric Use** Of the total number of patients who received NEXIUM in clinical trials, 778 were 65 to 74 years of age and 124 patients were ≥ 75 years of age. No overall differences in safety and efficacy were observed between the elderly and younger individuals, and other reported clinical experience has not identified differences in responses between the elderly and younger patients, but greater sensitivity of some older individuals cannot be ruled out. **ADVERSE REACTIONS** The safety of NEXIUM was evaluated in over 10 000 patients (aged 18-84 years) in clinical trials worldwide including over 7,400 patients in the United States and over 2,600 patients in Europe and Canada. Over 2,900 patients were treated in long-term studies for up to 6-12 months. In general, NEXIUM was well tolerated in both short- and long-term clinical trials. The safety in the treatment of healing of erosive esophagitis was assessed in four randomized comparative clinical trials, which included 1,240 patients on NEXIUM 20 mg, 2,434 patients on NEXIUM 40 mg and 3 008 patients on omeprazole 20 mg daily. The most frequently occurring adverse events (≥1%) in all three groups was headache (5.5, 5.0, and 3.8, respectively) and diarrhea (no difference among the three groups). Nausea, flatulence, abdominal pain, constipation and dry mouth occurred at similar rates among patients taking NEXIUM or omeprazole. Additional adverse events that were reported as possibly or probably related to NEXIUM with an incidence < 1% are listed below by body system: ***Body as a Whole:*** abdomen enlarged, allergic reaction, asthenia, back pain, chest pain, chest pain substernal, facial edema, peripheral edema, hot flushes, fatigue, fever, flu-like disorder, generalized edema, leg edema, malaise, pain, rigors; ***Cardiovascular:*** flushing, hypertension, tachycardia; ***Endocrine:*** goiter; ***Gastrointestinal:*** bowel irregularity, constipation aggravated, dyspepsia, dysphagia, dysplasia GI, epigastric pain, eructation, esophageal disorder, frequent stools, gastroenteritis, GI hemorrhage, GI symptoms not otherwise specified, hiccup, melena, mouth disorder, pharynx disorder, rectal disorder, serum gastrin increased, tongue disorder, tongue edema, ulcerative stomatitis, vomiting; ***Hearing:*** earache, tinnitus; ***Hematologic:*** anemia, anemia hypochromic, cervical lymphoadenopathy, epistaxis, leukocytosis, leukopenia, thrombocytopenia; ***Hepatic:*** bilirubinemia, hepatic function abnormal, SGOT increased, SGPT increased; ***Metabolic/Nutritional:*** glycosuria, hyperuricemia, hyponatremia, increased alkaline phosphatase, thirst, vitamin B12 deficiency, weight increase, weight decrease; ***Musculoskeletal:*** arthralgia, arthritis aggravated, arthropathy, cramps, fibromyalgia syndrome, hernia, polymyalgia rheumatica; ***Nervous System/Psychiatric:*** anorexia, apathy, appetite increased, confusion, depression aggravated, dizziness, hypertonia, nervousness, hypoesthesia, impotence, insomnia, migraine, migraine aggravated, paresthesia, sleep disorder, somnolence, tremor, vertigo, visual field defect; ***Reproductive:*** dysmenorrhea, menstrual disorder, vaginitis; ***Respiratory:*** asthma aggravated, coughing, dyspnea, larynx edema, pharyngitis, rhinitis, sinusitis; ***Skin and Appendages:*** acne, angioedema, dermatitis, pruritus, pruritus ani, rash, rash erythematous, rash maculo-papular, skin inflammation, sweating increased, urticaria; ***Special Senses:*** otitis media, parosmia, taste loss, taste perversion; ***Urogenital:*** abnormal urine, albuminuria, cystitis, dysuria, fungal infection, hematuria, micturition frequency, moniliasis, genital moniliasis, polyuria; ***Visual:*** conjunctivitis, vision abnormal. Endoscopic findings that were reported as adverse events include: duodenitis, esophagitis, esophageal stricture, esophageal ulceration, esophageal varices, gastric ulcer, gastritis, hernia, benign polyps or nodules, Barrett's esophagus, and mucosal discoloration. Postmarketing Reports – There have been spontaneous reports of adverse events with postmarketing use of esomeprazole. These reports have included rare cases of anaphylactic reaction. Other adverse events not observed with NEXIUM, but occurring with omeprazole can be found in the omeprazole package insert **ADVERSE REACTIONS** section. **OVERDOSAGE** A single oral dose of esomeprazole at 510 mg/kg (about 103 times the human dose on a body surface area basis), was lethal to rats. The major signs of acute toxicity were reduced motor activity, changes in respiratory frequency, tremor, ataxia, and intermittent clonic convulsions. There have been some reports of overdosage with esomeprazole. Reports have been received of overdosage with omeprazole in humans. Doses ranged up to 2,400 mg (120 times the usual recommended clinical dose). Manifestations were variable, but included confusion, drowsiness, blurred vision, tachycardia, nausea, diaphoresis, flushing, headache, dry mouth, and other adverse reactions similar to those seen in normal clinical experience (see omeprazole package insert-**ADVERSE REACTIONS**). No specific antidote for esomeprazole is known. Since esomeprazole is extensively protein bound, it is not expected to be removed by dialysis. In the event of overdosage, treatment should be symptomatic and supportive. As with the management of any overdose, the possibility of multiple drug ingestion should be considered. For current information on treatment of any drug overdose, a certified Regional Poison Control Center should be contacted. Telephone numbers are listed in the Physicians' Desk Reference (PDR) or local telephone book.

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likely were destroyed soon after they reached Washington and their contents remain a mystery—disappointed his Federalist proponents. Bayard, in a letter written that Monday, told a friend that "Burr has acted a miserable paultry part. The election was in his power." But Burr, at least according to Bayard's interpretation, and for reasons that remain unknown to history, had refused to reach an accommodation with the Federalists. That same Monday evening a dejected Theodore Sedgwick, Speaker of the House and a passionate Jefferson hater, notified friends at home: "the gigg is up."

The following day, February 17, the House gathered at noon to cast its 36th, and, as it turned out, final, vote. Bayard was true to his word: Delaware abstained, ending seven days of contention and the long electoral battle.

Bayard ultimately offered many reasons for his change of heart. On one occasion he claimed that he and the five other Federalists who had held the power to determine the election in their hands—four from Maryland and one from Vermont—had agreed to "give our votes to Mr. Jefferson" if it became clear that Burr could not win. Bayard also later insisted that he had acted from what he called "imperious necessity" to prevent a civil war or disunion. Still later he claimed to have been swayed by the public's preference for Jefferson.

Had Jefferson in fact cut a deal to secure the presidency? Ever afterward, he insisted that such allegations were "absolutely false." The historical evidence, however, suggests otherwise. Not only did many political insiders assert that Jefferson had indeed agreed to a bargain, but Bayard, in a letter dated February 17, the very day of the climactic House vote—as well as five years later, while testifying under oath in a libel suit—insisted that Jefferson had most certainly agreed to accept the Federalists' terms. In another letter written at the time, Bayard assured a Federalist officeholder, who feared losing his position in a Republican administration: "I have taken good care of you. . . . You are safe."

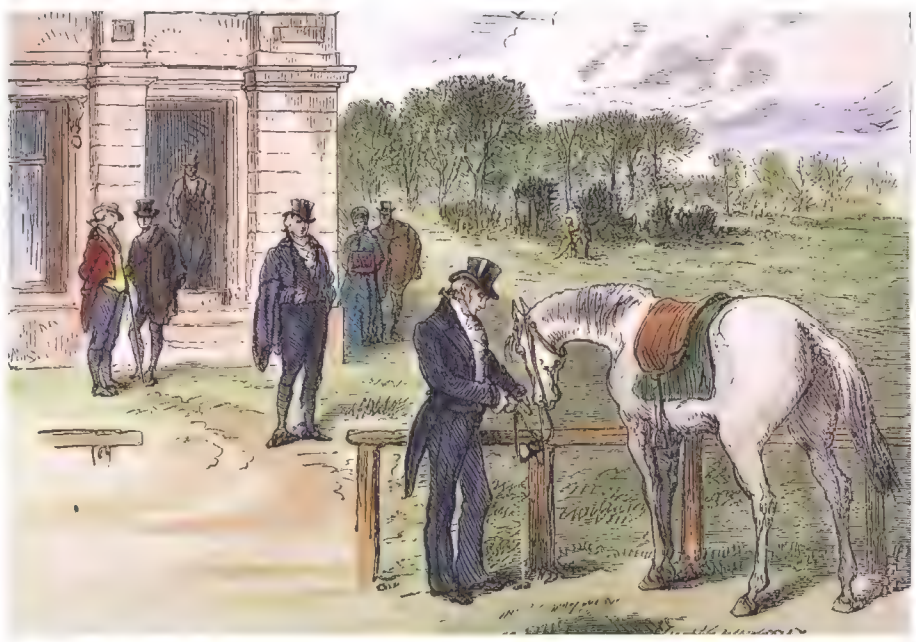
Even Jefferson's actions as president lend credence to the allegations. Despite having fought against the Hamiltonian economic system for nearly a decade, he acquiesced to it once in office, leaving the Bank of the United States in place and tolerating continued borrowing by the federal government. Nor did he remove most Federalist officeholders.

The mystery is not why Jefferson would deny making such an accord, but why he changed his mind after vowing never to bend. He must have concluded that he had no choice if he wished to become president by peaceful means. To permit the balloting to continue was to hazard seeing the presidency slip from his hands. Jefferson not only must have doubted the constancy of some of his supporters, but he knew that a majority of the Federalists favored Burr and were making the New Yorker the same offer they were dangling before him.

Burr's behavior is more enigmatic. He had decided to make a play for the presidency, only apparently to refuse the very terms that would have guaranteed it to him. The reasons for his action have been lost in a confounding tangle of furtive transactions and deliberately destroyed evidence. It may have been that the Federalists demanded more of him than they did of Jefferson. Or Burr may have found it unpalatable to strike a bargain with ancient enemies, including the man he would kill in a duel three years later. Burr may also have been unwilling to embrace Federalist principles that he had opposed throughout his political career.

The final mystery of the election of 1800 is whether Jefferson and his backers would have sanctioned violence had he been denied the presidency. Soon after taking office, Jefferson claimed that "there was no idea of [using] force." His remark proves little, yet during the ongoing battle in the House, he alternately spoke of acceding to the Federalists' misconduct in the hope that their behavior would ruin them, or of calling a second Constitutional Convention. He probably would have chosen one, or both, of these courses before risking bloodshed and the end of the Union.

In the days that followed the House battle, Jefferson wrote letters to several surviving signers of the Declaration of Independence to explain what he believed his election had meant. It guaranteed the triumph of the American Revolution, he said, ensuring the realization of the new "chapter in the history of man" that had been promised by Thomas Paine in 1776. In the years that followed, his thoughts often returned to the election's significance. In 1819, at age 76, he would characterize it as the "revolution of 1800," and he rejoiced to a friend in Virginia, Spencer Roane, that it had been effected peacefully "by the rational and peaceful instruments of reform, the suffrage of the people."



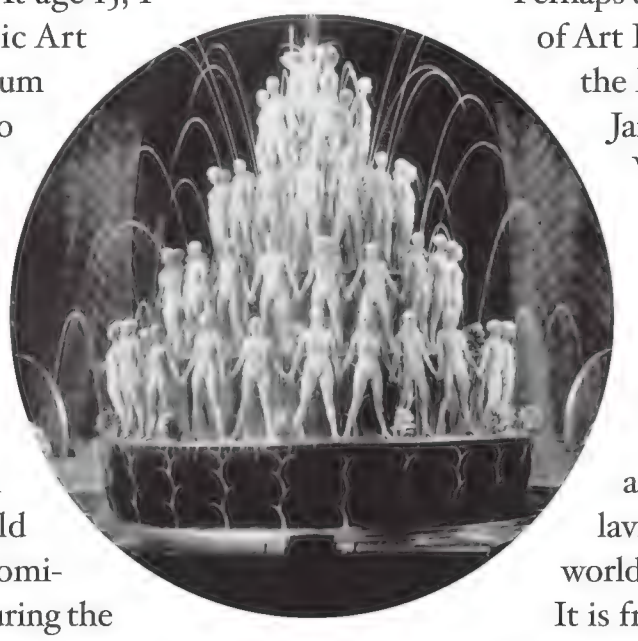
President-elect Jefferson, who actually arrived at the Capitol on foot for his inauguration on March 4, 1801, believed his victory would secure the future of American democracy: "The storm is over," he wrote in a letter two weeks later, "and we are in port."

GRANGER COLLECTION

ART DECO: HIGH STYLE

THE GLAMOROUS LOOK MARKED SKYLINES FROM NEW YORK TO SHANGHAI AND STREAMLINED EVERYTHING FROM FILM AND FASHION TO JEWELRY AND AUTOMOBILES BY STANLEY MEISLER

As a child in New York City in the 1930s, I grew up with Art Deco all around me. I never knew it was Art Deco; it was simply the world I lived in. The wondrous skyscrapers like the Empire State Building and the Chrysler Building, Radio City Music Hall, where my mother took me at Christmas, and my junior high school in the Bronx—all Art Deco. Many of the sumptuous sets in the movies I saw on Saturdays were Art Deco; even the Marx Brothers crossed the Atlantic on ocean liners decked out in Art Deco. At age 15, I worked at a flower shop in the majestic Art Deco Rockefeller Center, a virtual museum of the style, with more than 100 Deco paintings and reliefs in its buildings. And the New York World's Fair of 1939 and '40—in some respects Art Deco's culmination—was for me an attraction greater than any Xanadu.



Art Deco was the name given, long after the fact, to the brazenly commercial, streamlined style that emerged in Europe, primarily Paris, prior to World War I. Spreading around the globe, it dominated architecture and decorative arts during the 1920s and '30s. Whereas worshipers of Art Nouveau—the previous stylistic rage—were obsessed with nature and decadent symbolism and filled their designs with arabesques, whiplash curves, tendrils and images of seductive women, Art Deco designers embraced machinery and power. Using modern materials such as plastic and chrome, opulent fabrics and precious gems, their designs were replete with geometric patterns—circles, zigzags, squares—classical motifs, bright colors and just about anything that hinted of speed. There is pizazz and energy in Art Deco, as well as glamour and luxury.

By the end of World War II, Art Deco had come to be seen as too frivolous for a world in shock from death and destruction. But in the past quarter century, critics and scholars have taken up the style and preservationists have saved its buildings from the wrecking ball. Prices for Art Deco furniture and objects have soared. In 2003, Paris-based fashion designer Karl Lagerfeld sold his collection of Art Deco furniture, rugs, lamps and ceramics at auction in Paris for $8 million, nearly three times the expected price.

Perhaps the most comprehensive exhibition ever of Art Deco artifacts and images is on view at the Museum of Fine Arts, Boston, through January 9. First mounted last year by the Victoria & Albert Museum (V&A) in London, the show features more than 240 works: diamond and onyx jewelry from Cartier, a 1935 Auburn 851 Speedster, evening gowns by a host of French couturiers, travel posters by the Ukrainian-born French designer known as Cassandre and furnishings from the lavishly decorated grand salon of the 1925 world's fair of design in Paris.

It is from that fair—the Exposition Internationale des Arts Décoratifs et Industriels Modernes—that Art Deco takes its name. Mounted on 55 acres in the heart of Paris, it hosted pavilions displaying the decorative arts of some 20 countries, including Austria, Poland, Sweden, Czechoslovakia, the USSR and Italy. (The United States declined to take part because, according to the office of then Secretary of Commerce Herbert Hoover, "there was no modern design in America.") But the fair's main intent was to promote the work of new French designers. More than 16

PHOTOFEST; MICHAEL FURMAN / MUSEUM OF FINE ARTS, BOSTON; P. 56 MICHAEL PRINCE / CORBIS

The soaring spire and stainless steel crown of New York City's 1928-30 Chrysler Building (opposite) and the long, low hood and tapered rear of the 1935 Auburn 851 Speedster (above) reflect Art Deco's fascination with power and speed. Depression-era Hollywood films (top, a Busby Berkeley dance scene from *Footlight Parade*, 1933) spread Art Deco glitz and glamour to the world.

million people visited over the six months it was on view.

Although the Swiss architect Charles-Édouard Jeanneret, better known as Le Corbusier, had designed a pavilion sponsored by *L'Esprit Nouveau*, a decorative arts magazine he had founded, he disdained most of the works in the exposition. In a series of articles he wrote for the magazine, he called them too decorative, too luxurious and too expensive, mocking them as mere "*arts déco,*" from the title of the fair. But Le Corbusier's coinage did not catch on at first.

Over the years, the style acquired several names. Some called it "Jazz Modern" or "Zig-Zag Modern." Others referred to it as "Moderne." When critics, historians and curators began to take renewed interest in the style in the late 1960s, they focused on the 1925 Paris fair as its launchpad. Some picked up Le Corbusier's "arts déco" to describe the style—this time admiringly. British art historian Bevis Hillier dropped Le Corbusier's "s" for his 1968 book, *Art Deco of the 20s and 30s*, and the Minneapolis Institute of Art followed in 1971 with an exhibition called "The World of Art Deco." "The genie was out of the bottle," says Ghislaine Wood, curator of the V&A show. The name stuck.

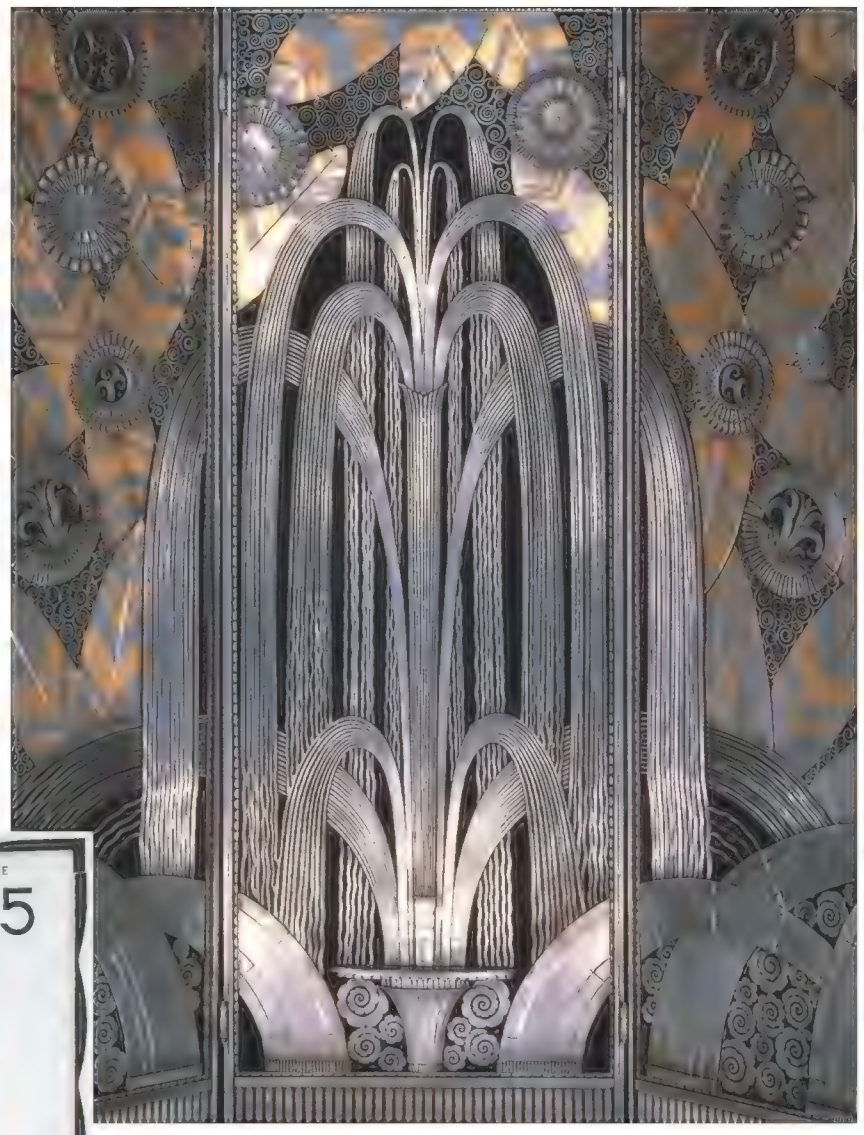
Art Deco made its mark in many fields, from architecture to fashion, film to furniture, graphic arts to dishware, even in the design of trains, planes, automobiles and ocean liners. Such variety makes the style hard to define. But there is one key element. "In Art Deco," Wood says, "decoration is more important than anything else."

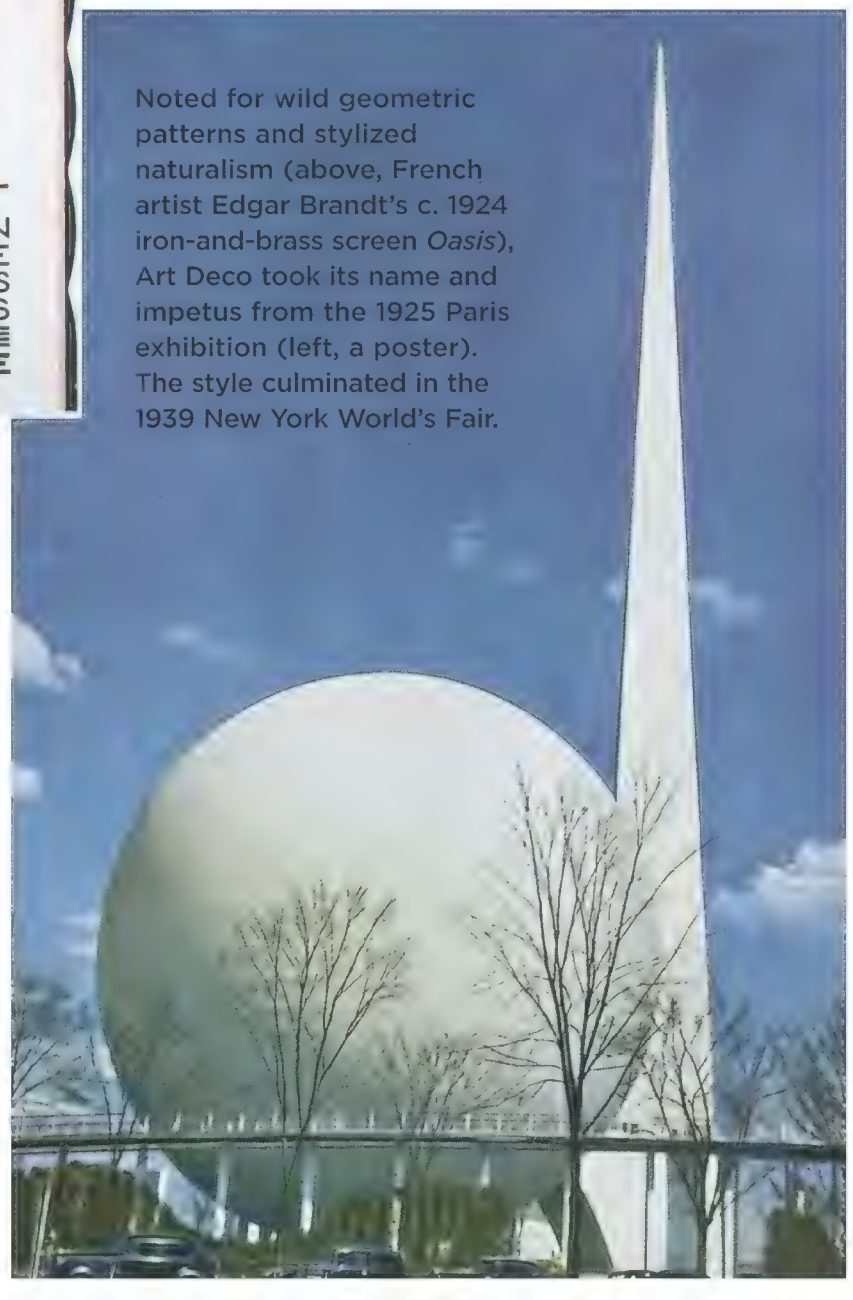
Art Deco designers also liked exotic themes and materials, elongated figures, artificial light and repetitive patterns of geometric and abstract forms. They drew inspiration from the cultures of ancient Egypt, Mesoamerica, East Asia and sub-Saharan Africa. And in the movement's later years, they incorporated the era's fascination with speed and began to streamline their work, making everything look as if it were in motion, even when the object—like a 1925 Ronson cigarette lighter in the exhibition—did not move at all.

At first glance, a sleek, streamlined object may seem less decorative than the elaborate works shown at the 1925 Paris fair. But, says Wood, comparing an ornate 1925 evening dress designed by Jeanne Paquin with an unadorned gown by Jeanne Lanvin made ten years later, "the streamlining has [itself] *become* the decoration."

Art Deco is associated in particular with two expatriates living in Paris: Josephine Baker and Tamara de Lempicka.

Washington-based author STANLEY MEISLER *is a frequent contributor to these pages. He wrote about Maya art in the July issue.*





Noted for wild geometric patterns and stylized naturalism (above, French artist Edgar Brandt's c. 1924 iron-and-brass screen *Oasis*), Art Deco took its name and impetus from the 1925 Paris exhibition (left, a poster). The style culminated in the 1939 New York World's Fair.

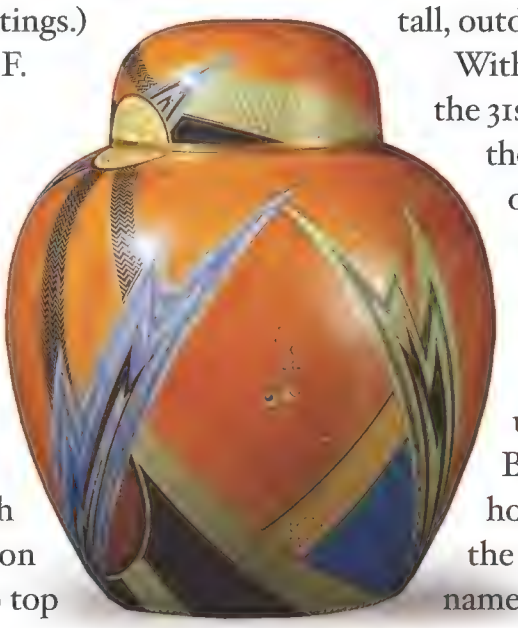
SCREEN DETAIL: CHRISTIES IMAGES / ARTISTS RIGHTS SOCIETY (ARS), NEW YORK / ADAGP, PARIS; POSTER © PERISPHERE AND TRYLON: V&A IMAGES / VICTORIA & ALBERT MUSEUM, LONDON (2)

CENTRE GEORGES POMPIDOU, PARIS. MUSÉE NATIONAL D'ART MODERNE. PHOTO: KIZETTE FOXHALL - LICENSED BY VICTORIA DE LEMPICKA / MMI. NEW YORK, N.Y.; GETTY IMAGES; GINGER JAR: MADE BY WILTSHAW & ROBINSON LTD. VICTORIA & ALBERT MUSEUM

"From a hundred pictures," Polish-born, Art Deco artist Tamara de Lempicka once said, "mine will always stand out." Her c. 1929 *Girl in a Green Dress* (left) is noted for its vivid, Cubist-like forms. American entertainer Josephine Baker (right, photographed in her "banana dance" costume) electrified Paris in 1925. The British-designed, enameled "Jazz" ginger jar (below) was made c. 1928.

Baker, a 19-year-old, St. Louis-born African-American dancer, enthralled Paris as the star of the 1925 La Revue Nègre. One print of her by her lover, the French artist Paul Colin, depicts her dancing at the Folies-Bergère in nothing but a skirt made of bananas. Polish-born artist Tamara de Lempicka also burst upon the scene in 1925 when a German fashion magazine put her self-portrait on its cover; wearing leather gloves, a pilot's helmet and a flowing beige scarf, Lempicka sat grandly behind the wheel of a green Bugatti. Her distinctive painting style featured elongated, sexually charged geometric figures. (Not surprisingly, perhaps, the singer Madonna collects Lempicka paintings.)

On this side of the ocean, the novelist F. Scott Fitzgerald wove Art Deco accouterments through his chronicles of the high jinks and illusory dreams of the young veterans and flappers who chased after life with devil-may-care abandon. It was during the close of the Jazz Age, as Fitzgerald called those years after World War I, that New York City sprouted what may be the greatest monuments to the Art Deco aesthetic: skyscrapers. Since the 792-foot-high Woolworth Building had been completed on Broadway in 1913, no developer had tried to top the world's tallest structure until Walter P. Chrysler, the automobile magnate, and architect William Van Alen teamed up in 1928. Their Chrysler Building was in the final stages of construction in 1930 when they learned it was about to be trumped by two feet by another new skyscraper, the Bank of Manhattan at 40 Wall Street. Van Alen, it seemed, had lost out to his former partner H. Craig Severance, architect of the Bank of Manhattan building. Soon after, workmen at the Chrysler Building assembled an enormous, 27-ton steel spike (secretly brought into the building in sections) and pushed it through the skyscraper's crown to make it 1,046 feet tall, outdoing 40 Wall Street by 119 feet.



With its colored frieze of automobile hubcaps at the 31st floor, steel gargoyles shaped like eagles on the 59th, and a magnificent, seven-story crown of stainless steel arches and triangular windows topped by its surreptitious spike, the Chrysler Building remains the most spectacular Art Deco skyscraper. But its title as the world's tallest held for only 11 months, until the 1,250-foot-high Empire State Building opened on May 1, 1931. By then, however, the boom was over. Wags joked that the tallest building in the world ought to be renamed "the Empty State Building." A *New Yorker*

Art Deco designers favored luxurious as well as new, synthetic materials. René Lalique's c. 1925 molded and cut glass lamp rests on a Bakelite base (top). The 1940s Fada "Bullet" radio (middle) is made of Catalin plastic, and the Boucheron corsage ornament (bottom) features lapis lazuli, coral, jade and onyx.

cartoon of the time shows a clerk poking out of a Chrysler Building window, peering through a telescope at the Empire State Building and telling his boss, "They haven't got a single tenant on the fifty-fourth floor yet, Mr. Chrysler."

What the great skyscrapers did have, especially during the Depression, was cachet. In the Bronx, the six-story Herman Ridder Junior High School, my alma mater, was completed in 1931 and named after the patriarch of the family that now runs the Knight-Ridder newspaper chain. It paid homage to skyscraper design with setbacks and vertical window strips. "Modernism in architecture has reached the schools," the *New York Times* wrote of the facility in 1929. Citing it as the first Art Deco school building in New York City, the city's preservation commission designated Ridder as a landmark in 1990.

It was Hollywood that beamed Art Deco to the world. "The backdrops for this exploration of contemporary dreams and aspirations were fantastic Deco-styled hotels, night-clubs, ocean liners, offices, apartments and skyscrapers," V&A curator Wood writes. During the darkest days of the Depression, some 60 million to 75 million Americans—out of the nation's 125 million people—went to the movies each week, often in lavish Deco movie palaces.

Busby Berkeley choreographed scores of synchronized dancers on enormous mechanical Art Deco sets for musicals such as *Gold Diggers of Broadway* (1933). Fred Astaire and Ginger Rogers whirled against a background of soaring columns and smoky-glass fixtures in Deco hotels and night-clubs in *Flying Down to Rio* (1933), *Top Hat* (1935) and *Shall We Dance* (1937). And Greta Garbo, John Barrymore and Joan Crawford cavorted gloomily in the Academy Award-winning *Grand Hotel* (1932), with its Deco chrome-and-glass-fitted lobby and streamlined French furniture.

The gleaming symbol of the 1939 New York World's Fair was a 700-foot-high Art Deco Trylon (a triangular-shaped pylon) and a 200-foot-diameter Perisphere (a massive round ball). Art Deco industrial designers such as Raymond Loewy and Norman Bel Geddes created some of the fair's most memorable exhibitions. I was barely 8 years old at the time, but I still vividly remember riding through a model landscape of cities, highways and farms in Bel Geddes' Futurama exhibit in the General Motors complex while a disembodied voice described the wonderful world in store in faraway 1960: slumless, pristine cities linked by cars speeding down 14-lane highways. After the ride, I proudly wore on my jacket a pin that read: "I have seen the future."

But Art Deco's moment had already passed, if only because, as Wood says, "the idea of chic luxury was seen as inappropriate after World War II." It was fun while it lasted.

LAMP: VICTORIA & ALBERT MUSEUM / ARTISTS RIGHTS SOCIETY (ARS), NEW YORK / ADAGP, PARIS; RADIO: VICTORIA & ALBERT MUSEUM; CORSAGE ORNAMENT: BOUCHERON S.A.S. PARIS

Dramatic lighting, faceted surfaces and light-reflecting materials characterized Art Deco interiors. The foyer of London's 1932 Daily Express Building (above) was the creation of British designer Robert Atkinson. Not even a 1925 white plastic and chromium-plated steel Ronson cigarette lighter (right) could escape Art Deco's signature streamlining.

INTERIOR: PETER APRAHAMIAN / CORBIS; CIGARETTE LIGHTER: V & A IMAGES / VICTORIA & ALBERT MUSEUM, LONDON

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When Luna, a people-loving orca, chose Vancouver Island's Nootka Sound for his home, he set in motion a drama of leviathan proportions

BY MICHAEL PARFIT

Whale of a

IT WAS A STORY about an animal, and then it wasn't. It was just a story about a lonely whale, at first. Then it got completely out of hand.

The story began in June 2001 when a baby male orca went missing from the waters near the San Juan Islands, between Washington State and Canada's Vancouver Island. He had been born in September 1999 into a group of about 80 orcas called "southern residents."

The group, named because it spends summers near the southern part of Vancouver Island, is listed as endangered by Canada and by Washington State, so the whale, nicknamed Luna in a contest held by a Seattle newspaper, was vital to its future. But a whale census taken in June 2001 did not find little Luna. Baby orcas almost never make it on their own, so scientists assumed Luna was dead.

They were wrong.

In April of this year my wife, Suzanne, and I drove to a remote and spectacular fiord called Nootka Sound halfway up the west side of Vancouver Island. We rented an apartment in Gold River, a mill town of about 1,500 near the sound, which has lost its mill and is trying hard not to go ghostly. This was where Luna had come back from the dead.

Luna showed up in Nootka Sound in July 2001. Among the first to see him was the crew of a spruced-up former minesweeper called the *Uchuck III*, which carries spools of cable to logging camps, beer to fishing lodges and tourists into ancient wilderness. The little whale came out of nowhere one day to cavort in the ship's wake, and over the next weeks, as the *Uchuck* went back and forth on its regular journeys, he became bolder and bolder.

"He breached, did tail flips, blew raspberries and squirted water at us," Donna Schneider, the ship's cook, remembered. "Sometimes he'd go right down the side of the boat, flapping his flipper at us."

Scientists identify killer whales by the individual shape of a splash of gray behind their dorsal fin, called a saddle patch, and the fin itself. They identified Luna by matching his patch with early photographs. Although his family, known as L pod, had not been documented in Nootka Sound—200 sea miles north of their summer territory—Luna had somehow found his way here. And though he was the equivalent of a human

Canada's Nootka Sound, 250 miles northwest of Seattle, has become Luna's playground. Orcas normally lead complex social lives in groups called pods, but this one is solitary.

Luna's seeming delight in boats and people has made him wildly popular. But the whale's interference with commercial fishing operations and fears that he will harm or be harmed by boaters have prompted Canadian authorities to take action.

toddler in orca years, he'd figured out how to eat enough salmon to keep himself alive.

Orcas, or killer whales, are actually members of the dolphin family. They are extraordinarily social; the southern residents stay together in their pods all their lives, which can be as long as humans'. But in Nootka Sound, Luna had no pod, so he made one out of people.

Soon, anyone who went out in a boat to Luna's part of Nootka Sound might meet him. He'd occasionally come up, put his head up on the gunwales, open his mouth, and let you rub his tongue. He played fetch. If you put a boat fender out on a rope, he'd hold it in his mouth and play tug-of-war, gently enough not to destroy the fender. When a tourist's hat fell off the *Uchuck*, Luna came up with it perched on his nose. When loggers dropped the end of a chain into the water, Luna brought it up and gave it to them. When he heard a familiar boat coming, he'd jump three times and then zip right over to ride the wake. To the people who played with him, he was a charmer, a rogue, a goofball, a rambunctious kid. People fell in love.

"You can see in people when they have been affected by a whale," says Lisa Larsson, a researcher who studies whale sounds. "You really get moved by them, and you don't know how, but it just touches you inside somehow."

Donna Schneider felt the same. On one occasion the little rascal came up beside the *Uchuck*, rolled over on his side, and looked her right in the eye. "When he looks at you," she said later, "it's like he's looking right into your soul. I can't breathe."

During our first week at Gold River, Suzanne and I were crossing a bay at high speed in our 14-foot Zodiac when Luna showed up unexpectedly. First, he leaped about 50 yards away. We were going over 15 knots. I thought we could keep away from him, but I was wrong. The next moment he blasted out of the water right next to us, going just as fast, his skin brushing the starboard side. He was bigger than the boat, and a lot higher. Boom, splash, a huge smooth back, a rush of noise, a rush of breath, a cascade of water in the face, then he was gone.

To me it was as if some barrier had evaporated, like the mist of the whale's breath. Everything had changed.

It was about then that I figured out that this was not just a story about an animal.

An intense response to an animal feels unique when you're having it, but it isn't. In fact, that kind of response is the focus of a growing new academic discipline called anthrozoology. To James Serpell, a professor at the University of

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MICHAEL PARFIT is profiled in this month's Editor's Note. He won the American Geophysical Union Walter Sullivan Award for his 1995 article in SMITHSONIAN *on the Lake Missoula flood.*

PP. 64-66 SUZANNE CHISHOLM (2)

Pennsylvania and a pioneer in the field, the effect Luna has on people is not surprising.

"People's attitudes are very affected by an animal's anthropomorphic characteristics," he says. "Their size, the fact that they're long-lived and have complex social lives, are all things that people equate with human characteristics. But with whales, people are also attracted by the elemental difference between them and us. When whales cross that barrier, it almost has spiritual meaning. That whales should want to be with us is both flattering and disturbing. It makes us rethink our whole relationship with animals."

The people of Gold River aren't anthrozoologists, but they understood the feeling. "When that whale came," Schneider said, "we thought it was a gift." The town that had been struggling with the closing of the mill now had something to delight in. "People always talked about how we lost our jobs," said Remi Charette, a former millworker who now runs a cappuccino shop. "Hey, we got nothing to talk about now but Luna."

Orcas are extraordinarily social. "People's attitudes are very much affected by an animal's anthropomorphic characteristics," says anthrozoologist James Serpell.

In Luna's early days in Nootka Sound, another piece of the story started to emerge, something even more freighted with emotion—and, as it turned out, with more consequence.

Nootka Sound is also home to an aboriginal band called the Mowachaht/Muchalaht First Nation. This band, or tribe, is heir to a grand tradition. Its people met James Cook, the great explorer of the 18th century, conducted a successful trade in sea otter pelts and even captured a white man's ship and took slaves. Today the tribe is down to just under 500 people, who live in a village near Gold River and struggle to overcome the many social problems that afflict aboriginal people everywhere.

In late July 2001, the patriarch of the band, Ambrose Maquinna, died. His death left a gap in the band's confidence, and a hole in the heart of his son and new chief, Mike Maquinna. Shortly after Ambrose died, one of the old man's friends went to his son. "Your father told me this," the friend said. "'When I go home, I want to come back as a *kakaw'in*.'" An orca.

A few days after Ambrose Maquinna died, stories came in from people down the sound about the lone orca they'd seen. Like Donna Schneider, Mike Maquinna had found a gift.

All this had developed in relative obscurity. But in late January 2002, Luna was announced to the world.

"A most unusual situation has developed here in British Columbia," wrote John Ford, a scientist who works for the Canadian department of fisheries and oceans (DFO), in an open letter to a whale advocacy group. Ford went on: "The . . . situation is the first time that a young resident whale has been found separated from its pod for a significant length of time."

The next day, newspapers picked up the story. The people of Nootka Sound would now have to share their whale with the world. Not only that, but their days of carefree play with Luna were officially over. The DFO announced that they would now enforce a law that doesn't allow people to disturb marine mammals. "Disturb" includes almost any contact, including that initiated by the animal itself.

The man who would lead this enforcement was Ed Thorburn, a Gold River fishery officer. Thorburn (p. 68) is forthright, with graying hair and a mustache. Though he does not, of course, talk about his feelings for Luna, his computer's screen saver has two sets of images: the Newfoundland street where he grew up, and Luna.

Thorburn was one of the first people to see Luna in Nootka Sound, and he watched the animal grow increasingly friendly to boats—and to him. Sometimes the whale would throw water at him with his tail, and sometimes when Thorburn stood with one foot up on the gunwale of his big Zodiac, the *Rugged Point*, Luna would come partway out of the water and rest his head on top of Thorburn's shoe.

"This is not accidental," Thorburn told me one day. "This sort of thing is deliberate action. I think he's as smart as you can get."

Thorburn was up against a variety of smart moves when it came to enforcing the rules. Both tourists and Gold River residents now used ruses to spend time with the whale—accidentally on purpose. Every time Thorburn found a boat stopped with Luna cavorting around it, he said, "people would say 'I ran out of gas.' Or 'I had to switch tanks.' So what happened was Luna became more and more enamored with boats."

But fishermen found Luna's attentions a mixed blessing. "If the fish weren't biting, you could go over and play with Luna," said Remi Charette. On the other hand, you can't fish at all when a whale is pushing you around; Luna often played longer than people wanted; and he liked to break underwater transducers, which send out sonic pulses for fish-finders.

"When you're out there and you get Luna, it's like you have the plague," one fisherman said. "You can't get rid of him, and nobody wants to come around, because they're afraid they might catch him from you."

DEBRA BRASH / VICTORIA TIMES COLONIST

Some encounters led to stronger emotions. Once I watched a charter fishing boat coming in to dock at Gold River. Luna approached the boat and started pushing against its outboard motors. The boat's skipper leaned over the side as Luna came up to breathe. "Luna!" he shouted. "Knock it off!" Then he muttered, "Stupid whale."

And when the *Uchuck* was told to stop pausing to play with Luna, Donna Schneider got angry. "How do they know that it's wrong to interact with a whale?" she said later.

The answer, like almost everything with Luna, is complicated. Usually animals only associate with humans when people bring food. But dolphins and whales, more than most other animals, occasionally seem interested in making contact with people simply for social reasons.

Around the world, a number of wild dolphins have chosen to spend time with people, and in recent years a few beluga whales have done the same thing. One of these, a beluga nicknamed Poco, has been associating with people on the east coasts of both Canada and the United States for the past year.

Ed Thorburn tried to corral Luna in part of a government plan to reunite him with his pod. Thorburn, who admits he is not immune to Luna's charms, must also enforce laws prohibiting people from disturbing marine mammals.

But in spite of the occasional success story, the outcome of these encounters is rarely happy. "In general," says biologist Toni Frohoff, "the more contact the animal has with people, the more likely it is for people or the animal to become injured." Frohoff is a marine mammal biologist in Washington State who studies what she calls solitary sociables, whales or dolphins on their own who choose to associate with people. She describes the relationships that develop as complex and risky. People, she said, tend to think of these mammals like domestic animals or even toys, but "cetaceans are probably expecting people to behave like cetaceans." Frustration ensues, encounters are sometimes more dangerous than fun, and often the animal is injured or simply disappears. While researching a paper for the International Whaling Commission, Frohoff came to a stark conclusion: "The animals that had the most contact with humans had the least likelihood of survival."

THIS FEAR FED AN EFFORT, led by a phalanx of whale advocacy groups from both sides of the border, to move Luna back to his pod. They argued that in associating with people, Luna was a danger to himself and others; if he were returned to his pod, he would be important as a breeding male; and if he were to live again with whales, his interest in people would probably fade. The groups demanded that Luna be somehow reunited with his pod as soon as possible and in the meantime that people be kept away from him.

During the next several months, two people were arrested and convicted of having broken the law by petting Luna. A boater allegedly hit Luna with a board to try to get him to move. Luna himself made things more complicated by spending a lot of time at the Gold River dock, where, when Thorburn or his colleagues weren't there to chase people off, he would delight visitors by moving from boat to boat, touching people's hands, playing with fenders and hoses, and bobbing up to nuzzle their startled dogs.

But the whale advocacy organizations kept up a steady drumbeat of emotional demands—"He's going downhill fast," said one campaigner—that Luna be moved. Though biologists resist describing animal behavior in human terms, the campaign helped itself along by calling Luna lonely. Ed Thorburn contributed: "I see a sadness in his eyes," he wrote. "I truly believe he is very depressed."

In October 2003, the DFO, in collaboration with the U.S. National Marine Fisheries Service, decided to make a move. If Luna's pod swam near Nootka Sound, the two groups later announced, Thorburn would try to take Luna to a reunion by leading him out to the open sea where he could hear his family's calls. Otherwise a team of aquarium experts would catch him in a net pen, hoist him into a truck, and drive him to a pen closer to his pod's home ground, where he'd be released when he made an acoustic connection.

Whale advocacy groups were happy, but Gold River residents had mixed feelings. Some people were glad, but others were suspicious that it was all just cover for a scheme to sell Luna to an aquarium. (The DFO said that permanent captivity was an option, but only as a last resort. It denied any conspiracy.) Others thought science was being arrogant.

A sign appeared in a deli window. Under the heading "Luna vs. Human Assumptions," a French-Canadian woman wrote: "[W]e can conclude . . . that whales are intelligent,

DEDDEDA STEMLER / VICTORIA TIMES COLONIST

social, affectionate. Do we know their thoughts, language, and feelings? . . . Who are we to disturb nature's course and determine what is best for him?"

IT WAS CLEAR that the Mowachaht/Muchalaht people did not want Luna moved, but nobody knew if they were going to do anything about it. Mike Maquinna said to reporters only that "nature should take its course." Ed Thorburn did not see any threat from the natives. "My own personal belief is that they won't interfere," he said.

On a warm May evening Luna came into the Gold River docks and moved restlessly from boat to boat. The people on the dock laughed when he played with a boat's hose, bending it around so it squirted straight up in the air. Some of us could not help but detect humanlike feelings. Suzanne found it poignant: "He just seems so desperate for company."

A few days later, as the men started to put together a pen near the dock, Suzanne and I climbed a hill with Lisa Larsson. She had kept detailed logs of Luna's calls for a research project run by an organization called OrcaLab, which monitors whales near northern Vancouver Island, and specializes, in part, in studying their calls. Larsson joked that after months of listening to Luna, she felt like his nanny. She was strongly in favor of his reuniting with his pod, she said, but she was uncomfortable about the way the DFO was going about it.

Mike Maquinna inherited his father's role as chief before the older man's death. A friend later told Maquinna that the late chief had wanted to come back as an orca.

GERRY KAHRMANN / THE PROVINCE

The big net trap, the hoist cranes and a plan to bolt a tag to his dorsal fin bothered her. "It would be so much nicer not to cause him any distress," she said. Like almost everyone, Larsson hoped that Luna's pod would swim near Nootka Sound on its way to its summer home, so that he could just be led out to meet his family. Thorburn shared that wish. For weeks, he had been teaching Luna to follow the *Rugged Point*, so he could take him to a reunion. But the pod didn't swim nearby. So it was decided that Thorburn would have to lead Luna to the pen instead.

The day that the DFO announced plans to go ahead with the capture, I again asked Mike Maquinna if he was going to do anything to oppose it. He gave a faint grin, "We're going to call up a big storm," he said, "so they'll run out of money and go away." It sounded like a joke.

By the morning of the announced capture, June 16, reporters had poured into Gold River. The day was sunny, but everyone was on edge. I went down to the docks early, but Thorburn had not yet gone out to lead Luna toward the pen.

Then, while I stood there wondering what to do, I heard the sound of singing: a paddlers' chant sung by many voices.

From behind the dock two traditional dugout cedar canoes emerged, lashed together, full of members of the Mowachaht-Muchalaht First Nation, paddling and singing.

They paddled away from the dock. They got a half a mile out in the sound, and suddenly, there was Luna, right beside them, blowing bursts of mist in their faces.

I ran down to my Zodiac and followed.

Everything now seemed to happen in slow motion. The canoes paddled away gradually; Luna followed them. A morning breeze came down from the mountains. The canoes put up a rectangular sail, and drifted gently before it in the sunshine, the green sail bright against walls of forest. Carried in the gentle wind, the sound of singing filled the narrow fiord.

By the day's end, the natives had taken Luna 30 miles down the sound to a distant bay.

"The overall feeling was as long as we keep him occupied, we'd keep him away from that pen," said Eugene Amos, one of the paddlers. "Then somewhere along the line it dawned on us that, my God, we're fighting for his freedom."

That's how the story changed again. It now came down to something more immediate and fundamental: a fight over freedom.

THE FIRST DAY'S canoe journey, reported around the world with glorious photographs of Luna putting his head up right beside the canoes to be petted, was a huge public relations victory for the natives. But the DFO still planned to put Luna in the pen.

The dispute over Luna went on for nine days. On many of those days, Thorburn went out in the *Rugged Point* to try to lead Luna toward the pen. On many of those forays, Mowachaht/Muchalaht paddlers were also there in one or two canoes to lead Luna away.

Luna acted as if it were a game. When Thorburn's boat showed up, he jumped and splashed; when the canoes showed up, he went porpoising over to them, bobbing up and down to be stroked by hands and paddles. It was fun to watch, but underneath was a sad irony: only now, when people were fighting over him, was Luna finally getting the attention he appeared to crave.

Everything came to a head on a memorable Tuesday, June 22. I had gone out early in my Zodiac, though not early enough to catch the first act of the drama. By the time I caught up to the action, Thorburn, with two other boats alongside, was leading Luna through a narrow canyon of

water about ten miles from the pen. Two miles behind, a single canoe was losing ground. Its paddlers were hot and tired after hours of futile work.

Then Luna got a bit goofy. The *Rugged Point* passed a booming ground, where men sort logs with little "dozer boats" before shipping them out. Luna stopped to play behind a log boom, out of Thorburn's reach. Luna splashed around with a dozer boat for about half an hour while Thorburn's flotilla drifted impatiently outside and the native paddlers in the canoe drew closer and closer.

When Luna finally came out, the canoe was less than a mile away, paddles flashing in the sunlight. After Luna took another break to investigate a fishing boat, the paddlers had caught up; Luna left Thorburn to join them.

The wind had picked up to about 25 knots, blowing the tops off whitecaps. The exhausted paddlers turned their canoe into the wind and struck out against it to lead Luna away. Slowly, agonizingly, the paddlers progressed. One mile, then two. Thorburn's boat moved around them. The wind blew up a haze that swept low along the water. The paddles rose and fell, rose and fell. The wind increased.

And the story deepened again. Now it was about courage as well as freedom. For a moment, the rights and wrongs of whether Luna should be moved to his pod didn't seem important. Now the story was also about those men and women of the Mowachaht/Muchalaht band, who had been given up for lost in the pod of humankind.

Because Luna often follows boats in Nootka Sound, fisheries department officials (aboard Zodiacs in June) hatched a plan to use them to lead him into the pen.

I stood on a rock, watching them come back from their many setbacks, watching them drive that canoe into the wind, one paddle stroke at a time, leading the whale, a symbol of their past and their hopes for the future, toward safety; building, against the craziest of odds, yet one more legend of perseverance and bravery in the 4,000-year-long story of their life on the shores and waters of Nootka Sound.

As the wind blew back toward me across the disturbed water, I heard the barking of Ed Thorburn's bullhorn demanding that the paddlers stop interfering, and the strong sound of the only answer: their voices, singing.

THE WATER WAS TOO ROUGH for my Zodiac. The canoe pulled out of sight. So I ran before the wind back to Gold River. No one there knew what was going on down the sound except for the DFO, which had radio contact with Thorburn, and the DFO wasn't talking. I found out later what happened.

Far out in the windblown sound, Luna had left the canoes to play with a fishing boat and had followed it partway back to Gold River. Thorburn then led him the rest of the way, right through a log-boom barrier up to the pen.

Thorburn had once talked to Suzanne and me about leading Luna into the pen. "That's a lot of credibility I'm going to lose with him," he said. "I feel guilty now, and I haven't even done it. But I'd rather have him back with his pod, that's my whole reason."

Now the moment had come: Thorburn moved his boat slowly into the pen. Luna followed. Then the whale veered away. Thorburn did it all again. Again, Luna veered away.

This went on for about an hour. During that time the native canoe was towed home around the end of the Gold River dock.

Late in the afternoon, Luna trusted Thorburn enough to follow him all the way into the pen, then rested against the Zodiac and another boat.

As we watched, members of the capture team climbed onto the pen and tiptoed around its edges, and took up positions on its perimeter. Two men grabbed the rope designed to pull up a net at the entrance and trap Luna permanently. The drama was over.

Or was it? Moving slowly, almost nonchalantly, Luna slipped out of the pen.

We thought Thorburn and his team would just lead him back in. But then a different sound came into the air. Into the teeth of the wind, the natives were again singing.

Slowly, pitching into the chop, two canoes came around the corner of the Gold River dock. As they did, there was another sound. People from the town of Gold River, including many from the First Nation band, had come down to the dock, and now as the natives emerged for one last try, the people on the dock cheered.

And Luna? Did he hear the songs, or the paddles, or the sound of the cheers? All I knew then was that he'd moved away from the pen and gone underwater. I watched and watched the surface, along with everyone else. Then I saw him leap out of the water to join the Mowachaht/Muchalaht natives in Nootka Sound.

THE ATTEMPTS to catch Luna went on for two more days, but the steam had gone out of the effort. By the end of the week, the DFO started folding its nets. It was clear, Thorburn said later, "if we were going to do it, it would have to be with the cooperation of the First Nation people."

GERRY KAHRMANN / THE PROVINCE

GERRY KAHRMANN / THE PROVINCE

No one knew what the Mowachaht/Muchalaht would do in response to the government's plan to capture Luna. Maquinna hinted that he would let nature take its course. When the time came, the natives took to their canoes for nine days.

"There are no winners and losers here," Maquinna said in a speech to his people. "There is an education that's happened. The nonnative community has come to understand that we are strong spiritually and have a living culture."

Over the next weeks and months, Luna went back to what he'd been doing for three years: eating well, traveling the sound, trying to hang out with people, being something of a pest. In September, the DFO and the Mowachaht/Muchalaht people signed an agreement allowing the band to prevent anyone from interacting with Luna. Advocacy groups still promote a reunion.

But there has been a change. After the weeks of play and intense companionship with his old friend Thorburn and his new friends in the canoes, Luna has been left almost alone for months, and he appears to be trying harder to contact boats and the people in them. The press has lately carried stories of boats that Luna has, in the reporters' word, "attacked." Several rudders have been broken, and some people are demanding that he be removed.

Luna is stuck in a Catch-22. He learned how good companionship can be, but his friends have gone. So he demands attention from people who don't want to give it. And the people who do want to give it will face charges if they try.

One day after the capture was canceled, Suzanne and I went out to the bay, where Luna first appeared and where he still spends most of his time. We sat on a rock and watched him rolling in the sun.

As we watched, I thought of all the times that the press had described him as "the lonely orca." But that's not the whole story either.

Though most people believe that Luna would be best off with his family, there remains a gulf between people, as deep as Nootka Sound. The natives believe Luna should make his own choices; many others think people should make decisions for him. The difference challenges how we all think about animals.

Yet in one fundamental way the paddlers' bravery against the wind to keep Luna free was no different from Ed Thorburn's determination to move him to his pod. Natives or not, in the past centuries we have all built distance between ourselves and the rest of life. Now the great wild world never glances our way. But when an animal like Luna breaks through and looks us in the eye, we cannot breathe.

And so we become desperate to keep these wild beings alive. Please do not leave us, Luna. We are the lonely ones.

CORBIS

MIGHTY MACEDONIAN

ALEXANDER THE GREAT

BY RICHARD COVINGTON

TAKING MEASURED STEPS around a lush garden terrace in ancient Egypt, Anthony Hopkins as the Macedonian general Ptolemy dictates his memoirs of helping Alexander the Great conquer the world. While he strolls beneath the palm trees of the ancient library in Alexandria—in reality, a sprawling movie set at Shepperton Studios outside London—the aged ruler of Egypt delivers a bombshell. "We killed him," Ptolemy says.

Literally? Or metaphorically? With Oliver Stone writing and directing, you never know for sure, even though the notion that Alexander was poisoned by his generals is "as dead as doornails," says Robin Lane Fox, a British biographer of Alexander who worked as a consultant on the movie. Stone, after all, defended the multiple-gunmen conspiracy theory of the Kennedy assassination in his 1991 movie, *JFK*.

In the library scene, Ptolemy, portrayed by Hopkins as a world-weary old soldier, says that if Alexander's men didn't literally poison his body, their refusal to follow him deeper into

Alexander's achievements have long inspired artists, from the Romans who immortalized him at Pompeii (left) to maverick director Oliver Stone (above right, with Colin Farrell, who portrays him in a new film).

BRIDGEMAN ART LIBRARY; JAAP BUITENDIJK / WARNER BROTHERS

India surely poisoned his spirit. "I never believed in his dream," he says. "The dreamers exhaust us."

True enough, no conqueror ever dreamed so exhaustively as Alexander the Great. In the fourth century B.C., the Macedonian warrior-king attacked the Persian Empire, the most powerful realm in the world, with almost 50,000 soldiers—then ranged across three continents for more than a decade, subduing tens of millions of people. By the time Alexander died in June 323 B.C., six weeks shy of his 33rd birthday, his empire stretched from the Balkans to the Himalayas—an unprecedented kingdom that spanned what is now Greece, Turkey, Lebanon, Syria, Jordan, Israel, Egypt, Iraq, Kuwait, Iran, Afghanistan, Pakistan and parts of India, Turkmenistan, Uzbekistan and Tajikistan.

Despite his imperialist accomplishments, Alexander has always seemed a melancholy figure, possessed by what the ancient Greeks called *pothos*, a passionate yearning. Once, when court philosopher Anaxarchus described the infinite number of worlds in the universe to him, Alexander broke down crying. "There are so many worlds," he lamented, "and I have not yet conquered even one."

It was this pothos, as much as his military genius, that would make him a romantic hero—to the 17th-century English poet John Dryden, to Sigmund Freud, to world leaders from Julius Caesar and Napoleon to Dwight David Eisenhower. Others, such as St. Augustine and Dante, reviled him as a murdering, plundering bandit. Frank Holt, an Alexander authority at the University of Houston, estimates that more than 2,000 books and articles have been written about him in the past 40 years.

Yet the truth about Alexander remains elusive. For one thing, as Cambridge University's Paul Cartledge (author of *Alexander the Great: The Hunt for a New Past*) points out, none of his actual words was recorded verbatim. Although there were several written eyewitness accounts of Alexander's campaigns, they survive only as fragments written down centuries later by sympathetic interpreters. Other writers suppressed or distorted events to make him look heroic or demonic, depending on their agendas.

Historians' verdicts vary. Some view Alexander as a charismatic, visionary leader intent on constructing a fusion of East and West, while others condemn him as a cruel and unstable megalomaniac, an ancient Stalin or Hitler who cared less about unifying mankind than consolidating control over as much territory as he could grab. A third camp credits Alexander with bringing Western notions of civilization to the East, using methods that seem brutal by today's standards but were acceptable in their time. Perhaps historians are divided because the man himself was divided—swinging wildly from blind wrath to acts of selfless generosity.

Historical novelists like Mary Renault and Valerio Manfredi have eagerly mined the Alexander legend, but few filmmakers have tackled the subject. Director Robert Rossen's 1956 *Alexander the Great*, with Richard Burton, was a heavy-handed dud. Since the success of *Gladiator* in 2000, however, "swords-and-sandals" epics—last in vogue with *Ben-Hur* in 1959 and *Spartacus* in 1960—are back, and at least three Alexander films are in the works—by Baz Luhrmann (director of *Strictly Ballroom* and *Moulin Rouge*), due out next year; by Ilya Salkind (producer of *Superman*); and by Stone, whose $150 million juggernaut with Colin Farrell in the title role is due to open across the country this month.

"Basically, I wanted to do the film as an experiment," says Stone, "to see if Alexander's motivations hold up today." Tak-

MIKE REAGAN

Paris-based author RICHARD COVINGTON *last wrote for* SMITHSONIAN *about Cambodia's Angkor temples in February 2004.*

In a decade, Alexander conquered vast stretches of Europe, Africa and Asia. The map above approximates his route as he swept east and the span of his 3,000,000-square-mile empire.

ing a break from editing the movie at a studio west of Paris in June, the director sounded more like a star-struck fan than notorious Hollywood maverick. "He was the Sun God, the star of all time, Joe DiMaggio, Mickey Mantle rolled into one," Stone says. "Some historians put him down . . . in a class with Genghis Khan and Attila the Hun, but they miss the point. No tyrant ever gave back so much. His life was not about money for himself, but about his growing curiosity, engaging and fulfilling his intellect, his consciousness."

There's substantial agreement on one issue: Alexander's military prowess. "He would've made mincemeat of any Roman who came over the hill," says biographer Lane Fox. "Julius Caesar would've gone straight back home as fast as his horse could carry him." And Napoleon? "Alexander would've wiped him out too. Napoleon only fought dodos."

Alexander personally spearheaded his attacks, suffering severe arrow, lance, sword and knife wounds. As Roman historian Arrian said of Alexander around A.D. 150, "The sheer pleasure of battle, as other pleasures are to other men, was irresistible." Once, when he found himself stranded without

a ladder atop a fortress surrounding Multan in present-day Pakistan, he jumped straight down alone into the midst of the enemy, instead of leaping outside the walls to safety. Managing to fend off his attackers until help arrived, he received a nearly fatal arrow wound that may have punctured his lung. When his doctor insisted that officers hold him down to keep him from squirming, Alexander waved them away, sitting stoically as the surgeon sliced the deeply embedded barb out of his chest. "As a warrior and strategist," Lane Fox says, "no one compares to Alexander."

Born in July 356 B.C. in Pella, near the Aegean coast in then Macedonia (now Greece), Alexander was the only son of the ruthless King Philip II and the hot-tempered Olympias. (After Philip died, she killed Philip's last wife, Eurydice, and Eurydice's baby daughter, Europa.) At the time of Alexander's birth and right up until Philip's assassination 20 years later, Alexander's father was preoccupied with consolidating the Macedonian Empire through diplomacy, political marriage, intrigue and war—particularly against the rebellious Greeks to the south. Although Macedonians spoke Greek and regarded themselves as Greek, the Athenians, Thebans and citizens of other Greek city-states dismissed them as culturally inferior hicks.

According to Peter Green, professor emeritus of classics at the University of Texas at Austin, Olympias spoiled her son outrageously; he idolized her in return. The love-hate relationship that Alexander had with his father, says Green, was "an ambivalent blend of genuine admiration and underlying competitiveness." From his father, Alexander is believed to have inherited courage, quickness of decision and intellectual perceptiveness. His mother, who may have tried to turn their son against his father, gave him a will stronger than Philip's, as well as fervent religiosity.

When the prince was a young boy, he eyed a black stallion, Bucephalas, that neither the king nor anyone else could control. As the horse stymied rider after rider, Alexander noticed that he reared at the sight of his own shadow. When Alexander's turn came, he calmly stroked the animal, turned his head into the sun so that he could not see his shadow and galloped off in triumph. "My boy, you must find a kingdom big enough for your ambitions," Philip declared. "Macedonia is too small for you." Alexander rode Bucephalas until the war horse died in 326 B.C. fighting elephant-mounted brigades in present-day Pakistan.

During his early teens, Alexander was taught by Aristotle, who inspired the prince's lifelong interest in biology, medicine and zoology. Ultimately, Alexander broke ranks with his tutor on an issue that was to become critical for the future empire. Unlike Aristotle, who viewed non-Greeks as barbarians, the Macedonian Alexander was less prejudiced, and would come to rely on conquered Persians and other foreigners to play prominent roles governing his far-flung territory.

Alexander was a handsome youth with shoulder-length blond hair, prominent forehead, ruddy complexion and "a certain melting look in his eyes." Historical sources suggest Alexander was bisexual, an orientation that bore no stigma in his day. He had at least two male lovers—his childhood friend and fellow soldier Hephaestion, and the Persian eunuch Bagoas—and fathered a child with his Sogdian wife, Roxane, and perhaps one with his Persian mistress. Even so, he had an ambivalent attitude toward sex. "Sex and sleep alone make me conscious that I am mortal," he supposedly once remarked.

Raised to believe that he was descended from both the Greek heroes Achilles and Herakles, the young Alexander acquired a zealous reverence for the ancient Greek myths. He loved to recite passages from the plays of Euripides, and he slept with a dagger and a well-thumbed copy of the *Iliad* beneath his pillow during his campaigns.

In the year 336 B.C., as Philip entered an outdoor theater to preside over a wedding, he was fatally stabbed by a bodyguard named Pausanias. Although it was widely rumored that Olympias, recently rejected by the king in favor of a younger wife, colluded in the murder, Lane Fox says the idea that her son had a hand in the assassination is "a bit wild."

Nevertheless, Stone's film, playing with the son's possible Oedipal feelings for Olympias, keeps both of them on the hook. "Anybody who's a dramatist has to ask if Alexander and his mother had a role in Philip's death," the director counters with a conspiratorial grin. Unlike Oedipus, who did not know the man he killed was his father at the time of the murder, Alexander would have been fully aware of his crime's enormity.

Just 20 years old, Alexander seized the throne, summarily murdering or exiling a number of rivals. Within a year, he reasserted control over the recalcitrant cities and tribes that had frustrated Philip, expanding the boundaries of the Macedonian kingdom north to the Danube and west toward the Adriatic. When Thebes revolted, he slaughtered or sold into slavery some 30,000 citizens, then razed the city, except for temples and the house of the revered poet Pindar. After this example, Athens and the other Greek cities—with the stubborn exception of Sparta—pledged allegiance to the young king. Perhaps more important, they also promised him soldiers and financial support for an invasion of Persia.

In May 334 B.C., Alexander sailed his army three miles across the Hellespont (Dardanelles strait) in present-day Turkey, casting his spear into the sandy shore to dramatically claim all of Asia as his "spear-won prize," in the Roman historian Curtius' vivid first-century imagery.

After defeating an advance Persian force at the Granicus River 60 miles northeast of Troy and fighting all across Asia Minor, Alexander faced off against the Persian king Darius III at Issus in southern Turkey. Though sources disagree on the exact numbers, Alexander probably faced a larger force of Persians, across a narrow plain. Alexander's cavalry, backed

JAN THE ELDER BRUEGAL, LOUVRE, PARIS / BRIDGEMAN ART LIBRARY

At Issus, Alexander's army fought a much larger Persian force. The battle (above, in a 17th-century rendering) was a victory for the young Macedonian, but the Persian ruler escaped.

by archers and by infantry wielding 16-foot-long pikes, smashed through the enemy in well-orchestrated charges. Alexander spurred Bucephalas headlong toward Darius, who spun his chariot around in retreat and ultimately made a successful getaway.

The conquest continued. Following a grinding, seven-month siege, Alexander captured the island fortress of Tyre, in present-day Lebanon; Egyptians, oppressed by the Persians, welcomed him as a liberator. Sailing down the Nile to the Mediterranean, the 24-year-old sovereign came across a former Persian fortress with a superb natural harbor that he chose as the site of his future Egyptian capital, the first of several Alexandrias he would establish as he swept east.

The young ruler still craved a clear-cut victory to lay claim to all of Persia. Darius, meanwhile, was conscripting a stupendous new army from the farthest reaches of his empire, gathering his forces in the Persian winter capital of Babylon. The Persian ruler (who hadn't taken Alexander seriously enough the first time they faced off) finally marched more than 200,000 men 275 miles north to the open plain at Gaugamela, where he deployed cavalry clad in chain mail, chariots equipped with scythe blades on their wheels, and mounted elephants.

With 47,000 men, Alexander was spectacularly outnumbered. When his senior generals advised him to attack at night to even the odds, he indignantly retorted, "I will not demean myself by stealing victory like a thief." The king slept late on the day of battle, coolly emerging with an all-or-nothing plan. He ordered one wing of his cavalry to charge Darius' far left flank, another to aim for the far right, leaving his own infantry vulnerable in the center. As Darius' mounted corps tore away in opposite directions to meet the Macedonian squadrons, Alexander spurred a wedge of riders straight into the heart of the Persian ranks, splitting them in two. The gamble worked. Within minutes, the battle turned into a debacle. The Persians sounded a retreat, and Darius again slipped away on horseback.

After Alexander occupied Babylon, he continued his triumphant march east to Persepolis, the ceremonial center of Persia. He marveled at the dazzling gilt, bronze and marble palace and the hundred-columned hall where kings reigned from a golden throne. Inside the treasury he seized 3,000 tons of gold and silver, among the richest hoards in history.

Alexander and his officers celebrated with a feast. The inebriated king grabbed a torch and set fire to the tapestries and beams of the massive palace. Other drunken revelers joined him, stoking the inferno to the accompaniment of flutes and singing. Within hours, Persia's hallowed shrine was a smoking ruin.

Darius ranged across the countryside in what is now

northern Iran, trying to rebuild his devastated army. Alexander, in pursuit, caught up with him too late. Bessus, one of the monarch's own generals, had murdered Darius and proclaimed himself king. At about this time, Alexander was making a critical transformation, one that would later alienate his troops but lead to a dramatic cultural shift. Hoping to solidify control over his new territories, he adopted Persian dress and customs and invited former adversaries into his inner circle. To win the support of his new subjects, Alexander even ordered a royal burial in Persepolis for Darius. But "the sight of their young king parading in outlandish robes, and on intimate terms with the quacking, effeminate barbarian nobles he had so lately defeated, filled [his troops] with genuine disgust," Green writes in his biography *Alexander of Macedon, 356-323 B.C.*

When Alexander was informed that disgruntled soldiers were plotting to kill him, he arrested seven of the alleged conspirators, including Philotas, the son of Parmenio, a venerated general who had fought under both Philip and Alexander. Although the evidence against Philotas was weak, he and the others were stoned to death. Then, anticipating that Parmenio would seek revenge for his son's execution, Alexander had the 70-year-old commandant stabbed to death. The killings had a chilling effect on Alexander's men. "From now on, Alexander never trusted his troops," Green says. "The feeling was mutual."

BUT ALEXANDER STILL thirsted for conquest. He led his unhappy men over the Hindu Kush, to capture Bessus and take control of his home province of Bactria in what is now northern Afghanistan. Crossing the 11,600-foot snowbound passes in April, many of the soldiers suffered severe frostbite and snow blindness. Bessus and his Persian troops, caught off-guard by Alexander's risky offensive, retreated into Sogdiana (present-day Uzbekistan, Turkmenistan and Tajikistan). But Bessus' Sogdian allies, fearing Alexander's attack, handed him over. Alexander ordered Bessus' ears and nose cut off, then likely had him crucified.

In just five years, Alexander had toppled the mighty Persian Empire and expanded his empire eastward 2,500 miles. Yet he was far from content, and his control over his men was slipping. In the summer of 328 B.C., Alexander set up headquarters in Maracanda (now Samarkand in modern-day Uzbekistan). When he started boasting about his victories at yet another drunken banquet, Cleitus, a grizzled cavalry officer who had saved Alexander's life at the Granicus River, bluntly reminded him how much he owed his father and the Macedonian veterans. Incensed, Alexander accused Cleitus and other senior officers of cowardice. "Those who died defending you are the lucky ones," Cleitus roared back at him. "At least they never lived to see Macedonians thrashed with Median rods or kow-towing to Persians before they can have an audience with their own king!" Screaming that this was yet another plot against him, Alexander grabbed a spear and ran his beloved comrade through the chest, killing him instantly. Immediately, the king was possessed by remorse. Yanking the spear out of Cleitus' body, he tried to impale himself on it. After a few officers jerked it away from him, he shut himself up in his tent for days, grieving.

Eventually, Alexander rallied, prodding his multinational crew of Macedonian, Persian and Bactrian soldiers toward the next goal: India. En route, the 28-year-old became smitten with Roxane, a princess captured in the siege of a Sogdian fortress and "the loveliest woman in Asia, after Darius's wife," according to Arrian, a second-century Greek biographer rarely given to exaggeration. Marrying for love in 327 B.C., the pragmatic Alexander also calculated that an alliance with a noble family from outer Persia would help legitimize his power.

Pushing farther east to the Hydaspes River (now the Jhelum River in Pakistan), the Macedonians faced off against the Indian king Porus at a crossing some 70 miles southeast of present-day Islamabad. Alexander's 50,000 troops vanquished a force of 35,000 soldiers and 200 mounted elephants, but his men proved no match for monsoon season. "It was pelting with rain, the men were terrified, there were snakes everywhere," says Lane Fox. "They were lost and did not feel they could go on any more."

Standing in front of the assembled ranks near the Hyphasis River, Coenus, a senior commander, did the unthinkable: he pleaded with Alexander to go home. Furious, the young king said that anyone who left would be considered a deserter, then stormed off to sulk in his tent for two days. But when Alexander's personal seer reported that the signs to continue east into India were unfavorable, the king used this excuse to save face and turn back to Macedonia. On hearing of Alexander's change of heart, the exhausted veterans erupted in cheers. Even in retreat, the contrarian Alexander scorned the known route home—back over the Hindu Kush to Babylon—in favor of leading his flotilla of 1,800 ships down the unfamiliar Jhelum, Chenab and Indus rivers to the Indian Ocean and hence west to the Persian Gulf.

It was far from smooth sailing. En route, hostile tribes put up fierce resistance—and were pitilessly exterminated. Cartledge views this trail of blood as one prolonged "fit of frustration at having been forced by his own troops to turn back." In July 325, nine months after setting sail, the Macedonians finally reached the Indian Ocean.

Still focused on building his empire, Alexander concocted an audacious scheme to revive ancient sea routes for transporting gold, spices, ivory and precious stones from India to the Middle East. The idea was that ships carrying food and supplies would sail up the coast of the Arabian Sea while Alexander led soldiers over a parallel inland route. The ships would drop off food for the army at prearranged intervals, while the soldiers in turn would supply the fleet with fresh water. If this land-sea relay made it to the Persian Gulf on a dry run, merchants could follow the same itinerary.

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The scheme would prove to be one of Alexander's gravest mistakes, subjecting his men to what Lane Fox calls "the most hellish march that [he] could possibly have chosen." In the oppressive night—the only time the sprawling caravan could move—the temperature seldom dipped below 95 degrees. Worst of all, monsoon winds delayed the fleet after Alexander's departure; the navy and army never met up, forcing both to subsist on the limited food and water they had brought with them. Reportedly, by the end of the two-month march, 15,000 of Alexander's men, or nearly half of the corps accompanying him, had perished—more than all the men killed in battle. The fleet, in contrast, reached the Iranian coast almost intact.

Back in Kirman, Persia, Alexander did little to mend relations with his men. He executed 6 of 20 provincial governors, and deposed two more. Then, in what Cartledge describes as a "reign of terror," he executed 600 men from his own garrisons for rape and pillaging in his absence. At Susa, he commanded 90 of his officers to marry aristocratic Persian women to strengthen the political bonds between Macedonians and Persians.

Despite the growing tensions—and crises like the sudden death of his lover, the soldier Hephaestion—Alexander still "hunted, diced, played ball, joked and banqueted" with his men. At one of these banquets, Alexander downed his usual enormous quantity of wine, then collapsed with a fever. Twelve days later, on June 10, 323 B.C., he died, probably of malaria. Just before he expired, he was asked to name a successor. Alexander weakly answered that the empire should go "to the strongest," Arrian wrote. "I foresee a great funeral contest over me."

With Alexander gone, the empire was riven by dissent, with his commanders fighting over territory. Roxane and her son, Alexander IV, born six weeks after the king's death, were murdered by a distant relative when the boy was 12 or 13; so was the king's mother, Olympias. As Alexander's embalmed body was being transported to Macedonia in a magnificent chariot, Ptolemy hijacked it to Alexandria, where it would stay for six centuries. Lane Fox speculates that the coffin later disappeared, probably destroyed in riots in the third century A.D.

Although Alexander's empire splintered shortly after his death, Greek arts, science and culture continued to pervade

Alexander (in an 18th-century oil painting) entered Babylon a hero. But his propensity to adopt the customs of the lands he conquered eventually alienated his soldiers, who mutinied.

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Middle Eastern and Asian societies for centuries. In Egypt, Greek physicians taught the study of human anatomy. In Babylon, Greek physicists devised a technique to electroplate silver to copper. Greek city planning prevailed in the many towns the king had established and was widely adopted elsewhere. Greek myths and philosophy spread well beyond the former empire's borders.

Alexander's legacy has long been a matter of debate. Cleitarchus, a fourth-century B.C. historian from Alexandria, portrays the king as a cruel, paranoid alcoholic. Eratosthenes of Cyrene, a third-century B.C. scholar at the Alexandria library, suggests that Alexander's conquests opened the eyes of the Greeks to other civilizations. Plutarch ventures the opposite—that Alexander civilized Persians, Sogdians and others. Johannes Gustav Droysen, a 19th-century German historian, proposes that the Macedonian king wanted above all to unify the entire world. Yet the modern historian Brian Bosworth dismisses such idealism, comparing Alexander's Indian campaign to Cortez's genocidal war against the Aztecs and condemning the king as a coldblooded imperialist.

Lane Fox says that "the fashion of the moment is to take a sour view of Alexander." But he adds: "You've still got to explain why so many people followed him with such devotion for so long."

"These days," says director Stone, a Vietnam veteran, "we have a strong antipathy for conquerors, but in Alexander's time, war was a way of life and soldiering a much more honorable profession."

As many historians conclude, it was his achievements as a commander on the field of battle that justify the name Alexander the Great. He was a military genius, and a hero to his men. He never asked them to do something he would not do himself, and he bore the wounds to prove it. He also shared his vast riches with his men. When he challenged his army to take the most difficult route, to do the impossible, they amazed themselves when they succeeded. At the Hyphasis River near Amritsar, when his soldiers pressured him to turn back, they may well have been too hasty. Alexander's promised land of India was nearly in their grasp.

Nowhere did Alexander articulate what was behind his all-consuming desire to master the world. To speculate that he was trying to surpass his father and win his mother's love, as some psychohistorians have done, is to take the easy way out. It may be, as Ptolemy wistfully concludes in the Stone film, that Alexander was blessed and cursed with an eternally unsatisfied longing, a pothos even he could not fathom. Perpetually racing the gods, his destiny remained exactly where it served him best—just out of reach.

More than a brilliant tactician, Alexander (Colin Farrell in the role, below) was also indisputably brave—and possibly cruel and unstable. Historians are likely to remain divided over his legacy.

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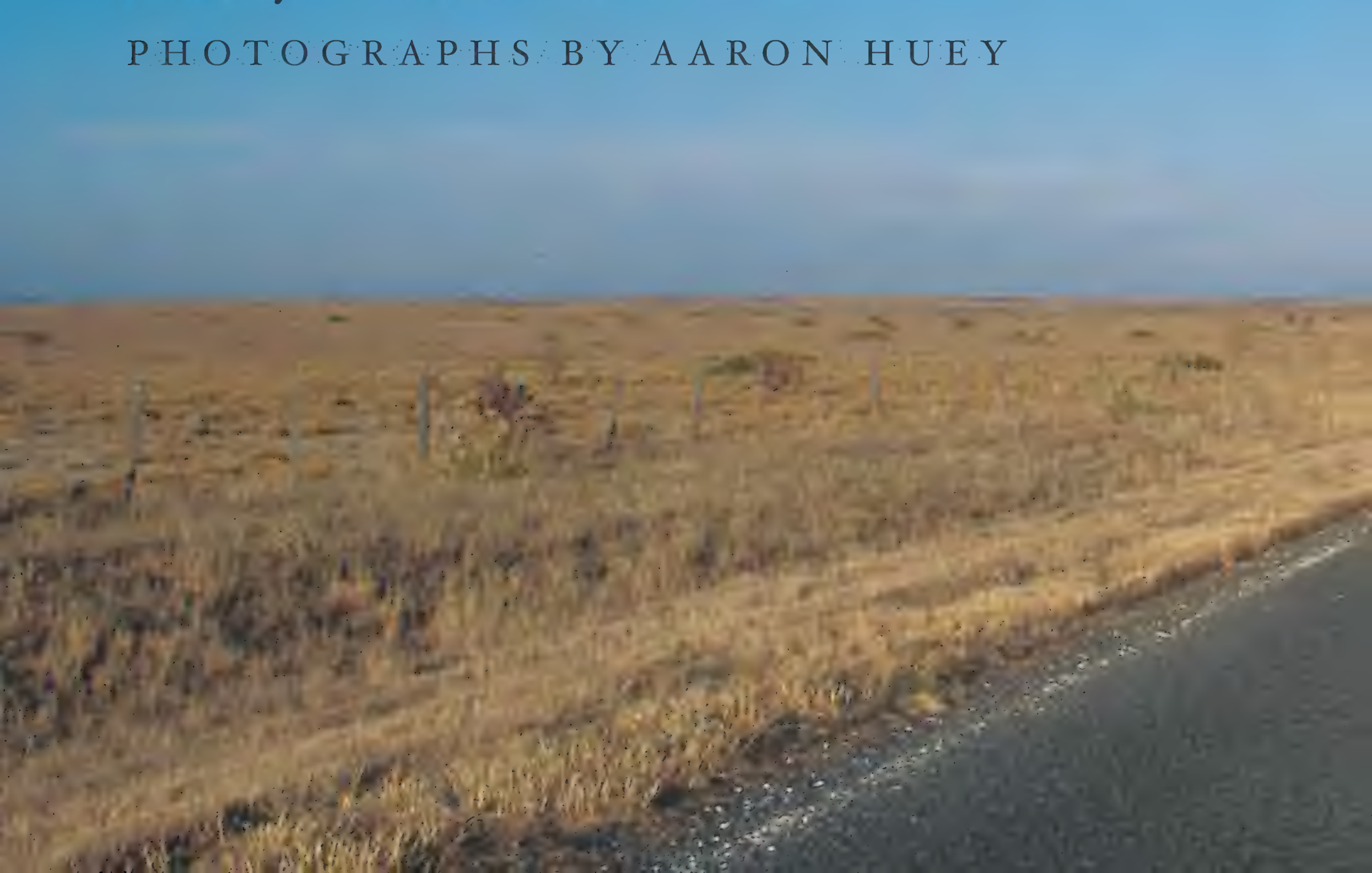
"I wanted to leave my stuff behind

WALKING AMERICA

Twenty-six-year-old Aaron Huey took his dog, his camera and an open mind on a journey from California to New York. Along the way he learned a lot about his country—and himself - *BY ANDREW CURRY*

PHOTOGRAPHS BY AARON HUEY



and go into other people's worlds."

"I had help everywhere. People always

I saw in their eyes something I was to see over and over in every part of the nation—a burning desire to go, to move, to get under way, anyplace, away from any Here.

—JOHN STEINBECK,
Travels With Charley: In Search of America, 1962

IN JANUARY 2002, Aaron Huey and his dog, Cosmo, began a walk across an America whose essence had changed very little since Steinbeck's time. Huey, then a wiry 26-year-old photographer living outside Santa Fe, New Mexico, decided to start in Encinitas, California. They passed through scores of unheralded small towns: Moriarty, New Mexico, and Claude, Texas; Anadarko, Oklahoma, and Old Alabam, Arkansas. By the time he and Cosmo reached New York City (3,349 miles and 154 days later), he had visited sorority houses and strip clubs, softball games and church basements in search of the unexpected.

Huey grew up in Worland, Wyoming (pop. 5,250), and left home at 18 to study stone sculpture in Slovakia. He started taking pictures while an art student at the University of Denver. In 1999, he traveled by himself across Asia taking photographs of the Taliban's religious schools in Pakistan, villagers in isolated parts of the former Soviet Union and protests in Iran. Many of his photographs—he uses a Leica with a wide-angle lens and gets close to his subjects—have been published in magazines and as a book, *Children of the Sun*. It was the uncertainty of his travels that captivated him. "I just never traveled much here," he says. "In America, the way we travel is so well-planned and predictable there's no adventure."

After three months working as an apprentice to photojournalist Steve McCurry in Manhattan in 2001, Huey was again ready for a change: "I realized I didn't want to stay in New York and work for other people—I wanted to take a big risk." He courted the unexpected. He made no advance arrangements; his only plan was to end up in Coney Island. "I wanted to be totally naive, totally unprepared. I knew if I trained, I was probably not going to like it," he says.

A few months before he set out, the photographer had rescued an 80-pound husky-malamute-wolf mix from an animal shelter in Fort Collins, Colorado, and named her Cosmo. Huey embarked one morning with just a few changes of clothes (including a pair of boots he spray-paint-

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ANDREW CURRY is general editor at SMITHSONIAN. *AARON HUEY is a photographer based in Seattle, Washington, and is sponsored by Kodak and Leica. His Web site is www.aaronhuey.com.*

FAIRGROVE, MISSOURI—The players and their moms all wave as Cosmo and I walk away. We walk to the gas station and set up camp in the grass. It is 8 p.m. I will start to walk again at 10 p.m. . . . At 10, two boys are trying to wake me up. They want to buy me some food; the older brother brings me coffee because I am still not awake. Am I really going to walk 19 more miles on two hours of sleep? I could have stayed in this town for a while. It is the kind of place that I look for. It is the kind of town that makes me love this country. But I am already out of town, walking as fast as I can with some new kind of energy that says I am invincible. But I am not. Five miles out of town I hit the wall. Thirteen more to go and I am feeling it. At the end of the night, at 4 a.m., we walk down the middle of the highway on the yellow line and move to one side or the other depending on which direction a car is coming from. Last miles are slow miles.

—Entries adapted from Huey's journal, *American Ocean*

made sure I had someplace to stay."

DAY 100, MILE 2,000 ~ FAIRGROVE, MISSOURI

DAY 99, MILE 1,970 ~ OZARK, MISSOURI

DAY 112, MILE 2,250 ~ EAST ST. LOUIS, ILLINOIS

"Why walk? Because it makes me feel

DAY 132, MILE 2,715 ~ NEAR SOMERSET, OHIO

DAY 124, MILE 2,527 ~ VERSAILLES, INDIANA

DAY 129, MILE 2,657 ~ NEW HOLLAND, OHIO

like a giant. Tonight I am a giant."

HUEY, ILLINOIS—For the first hour out of town I am flying. The beats in my headphones make me walk fast and make me raise my fists in the air on this shoulderless highway. Shoulderless but not soulless. There is much soul here today, and five miles out of town there is a town called Huey. Population 200. The post office is open. I am told by the woman inside that it is the smallest post office in Illinois. Ten feet by 10 feet. Orange tint to the sky with some grand sailboat clouds that pass over a place where many 18-wheelers park. Another restaurant. . . . People smile at the highway man. They do not see people like him very often. That is worth it. The smiles. The questions. The how do you do it. Check on Cosmo and fill up her water. Feed her some meat scraps from the kitchen. When I come back inside, there is a $20 bill sitting on my table on top of my bill. I think a couple that had been listening to me talk left it for me on their way out. I didn't even get to talk to them. I smile. I was going to run out of money tomorrow. Now I will not.

DAY 143, MILE 3,086 ~ ALLENSVILLE, PENNSYLVANIA

ed gold), a tent, a sleeping bag, 90 pounds of dog food, two cameras—and no cellphone. Cosmo pulled the Comet, a small dogcart Huey had decorated with flames and loaded with the supplies. (Originally, Huey wanted a llama, but it turns out llamas get lonely, and two llamas were just too much.)

This one-man, one-dog carnival quickly began breaking down the walls that usually separate strangers in America. "If I was walking alone, nobody would have stopped to talk to me," Huey says. "The absurdity is what made it successful."

The longest he walked in one stretch was the 46 miles between the towns of Ozark and Buffalo, Missouri. In May and June, as he headed east of Indiana, Huey often walked all night to spare Cosmo from the heat of the day. The voyage (he titled his journals *American Ocean*) tapped into America's romance with restlessness, the same spirit Steinbeck had found when he drove in the opposite direction decades before. Day after day, Steinbeck encountered what he called the same "look of longing" on the faces of the Americans he met, and had the same conversation:

"Lord! I wish I could go," a neighbor told Steinbeck as he was packing to leave.

"Don't you like it here?"

"Sure. It's all right, but I wish I could go."

"You don't even know where I'm going."

"I don't care. I'd like to go anywhere."

In our secret imaginations, we romanticize drifters: cowboys, sailors, rootless rebels. The heroes are the ones who are rootless by choice, not homeless by necessity. Even Huey, a self-described "good-looking young white guy," found that it was not so easy convincing cops and wary citizens he was no threat. Cosmo and Comet helped. "If we didn't have that dogcart," he says, "we would have just been bums."

The loneliest part of the journey was the beginning—almost 1,000 miles across the deserts of California, Arizona and New Mexico—but once he reached the Texas Panhandle, strangers began reaching out to him. Once, he came out of a convenience store to find a $20 bill taped to the Comet. Drivers who had passed him on the highway in Quemado, New Mexico, left money at roadside restaurants to cover his meals. "I probably stayed in strangers' homes five nights of the week," says Huey. "People just passed me along."

Over and over again, people also told him how much they wished they could just pick up and walk with him. Near Chickasha, Oklahoma, a 5-year-old girl's parents stopped so their daughter could walk a mile with him; in Tahlequah, New Mexico, a schoolteacher walked with him all night long.

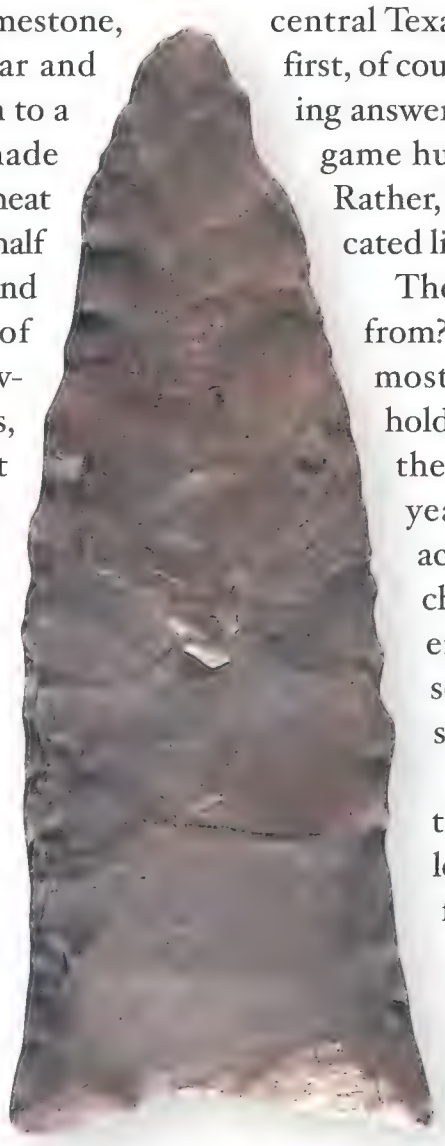
Today, Huey and Cosmo live in Seattle with Huey's fiancée, a troublesome 1987 Volkswagen van and debt. "People were really envious of what I was doing," he says. "Two years later, *I'm* really envious of it."

America's First Immigrants

You were probably taught that the hemisphere's first people came from Siberia across a long-gone land bridge. Now a sea route looks increasingly likely, from Asia or even Europe ~ *BY EVAN HADINGHAM*

ABOUT FOUR MILES from the tiny cattle town of Florence, Texas, a narrow dirt road winds across parched limestone, through juniper, prickly pear and stunted oaks, and drops down to a creek. A lush parkland of shade trees offers welcome relief from the 100-degree heat of summer. Running beside the creek for almost half a mile is a swath of chipped, gray stone flakes and soil blackened by cooking fires—thousands of years of cooking fires. This blackened earth, covering 40 acres and almost six feet thick in places, marks a settlement dating back as far as the last ice age 13,000 years ago, when mammoths, giant sloths and saber-toothed cats roamed the North American wilderness.

Since archaeologists began working here systematically seven years ago, they have amassed an astonishing collection of early prehistoric artifacts—nearly half a million so far. Among these are large, stone spearheads skillfully flaked on both sides to give an elegant, leaf-shaped appearance. These projectiles, found by archaeologists throughout North America and as far south as Costa Rica, are known as Clovis points, and their makers, who lived roughly 12,500 to 13,500 years ago, are known as Clovis people, after the town in New Mexico near where the first such point was identified some seven decades ago.



A visit to the Gault site—named after the family who owned the land when the site was first investigated in 1929—along the cottonwood- and walnut-shaded creek in central Texas raises two monumental questions. The first, of course, is, Who were these people? The emerging answer is that they were not simple-minded big-game hunters as they have often been depicted. Rather, they led a less nomadic and more sophisticated life than previously believed.

The second question—Where did they come from?—lies at the center of one of archaeology's most contentious debates. The standard view holds that Clovis people were the first to enter the Americas, migrating from Siberia 13,500 years ago by a now-submerged land bridge across the Bering Strait. This view has been challenged recently by a wide range of discoveries, including an astonishingly well-preserved site in South America predating the supposed migration by at least 1,000 years.

Researchers delving into the origins question have sought to make sense of archaeological finds far and wide, from Canada, California and Chile; from Siberia; and even, most controversially, from France and Spain. The possibility that the first people in the Americas came from Europe is the boldest proposal among a host of new ideas. According to University of Texas at Austin archaeologist Michael Collins, the chief excavator of the Gault site, "you couldn't have a more exciting time to be involved in

In 1932, an American archaeologist identified distinctive spearheads (above) associated with mammoth skeletons near Clovis, New Mexico. The discovery supported an emerging realization that humans lived with now-extinct ice age creatures in North America.

NATIONAL MUSEUM OF NATURAL HISTORY, SMITHSONIAN INSTITUTION; P. 90 GREG HARLIN / WOOD RONSAVILLE HARLIN, INC.

the whole issue of the peopling of the Americas. You can't write a paper on it and get it published before it's out of date. Surprising new finds keep rocking the boat and launching fresh waves of debate."

FOR PREHISTORIC PEOPLE, one of the chief attractions of the Gault site was a knobby outcrop of a creamy white rock called chert, which conceals a fine, gray, glasslike interior. If struck expertly with a stone or antler tool, the rock fractures in predictable ways, yielding a Clovis point. In the end, each spearhead has distinctive grooves, or "flutes," at the base of each face and was fastened to a wooden shaft with sinew and resin.

Ancient pollen and soil clues tell archaeologists that the climate in Clovis-era Texas was cooler, drier and more tolerable than today's summertime cauldron. Vast herds of mammoths, bison, horses and antelope ranged on the grasslands southeast of Gault, and deer and turkeys inhabited the plateau to the west. Along the creek, based on bones found at the site, Clovis hunters also preyed on frogs, birds, turtles and other small animals.

This abundance of food, coupled with the exceptional quality of the chert, drew people to Gault in large numbers. Unlike the majority of Clovis sites, which are mostly the remains of temporary camps, Gault appears to have been inhabited over long periods and thus contradicts the standard view that Clovis people were always highly mobile, nomadic hunters. Michael Collins says that of the vast quantity of artifacts found at the site, many are tool fragments, left behind by people who'd stuck around long enough to not only break their tools but also to salvage and rework them. The researchers also unearthed a seven by seven foot square of gravel—perhaps the floor of a house—and a possible well, both signs of more than a fleeting presence.

Another clue was concealed on a 13,000-year-old Clovis blade about the size of a dinner knife. Under a magnifying lens, the blade's edge is glossy, rounded and smooth. Marilyn Shoberg, a stone tool analyst on the Gault team who has experimented with replicas, says the blade's polish probably came from cutting grass. This grass could have been used for basketry, bedding, or thatching to make roofs for huts.

Among the most unusual and tantalizing finds at the Gault site are a hundred or so fragments of limestone covered with lightly scratched patterns. Some resemble nets or basketry, while a few could be simple outlines of plants or animals. Although only a dozen can be securely dated to Clovis times, these enigmatic rocks are among the very few surviving artworks from ice age America.

"What this site tells us is that Clovis folks were not specialized mammoth hunters constantly wandering over the landscape," says Collins. "They exploited a variety of animals, they had tools for gathering plants and working wood, stone and hide, and they stayed through the useful life of those tools. All these things are contrary to what you'd expect if they were highly nomadic, dedicated big-game hunters." Yet this unexpected complexity sheds only a feeble glimmer on the more contentious issue of where the Clovis people came from and how they got here.

IN THE OLD SCENARIO, still popular in classrooms and picture books, fur-clad hunters in the waning moments of the

Digging at the Gault site in central Texas (below), according to project director Michael Collins (above), has almost doubled the number of Clovis artifacts excavated in North America. Researchers there have also uncovered evidence of ice age art.

STEVEN PUMPHREY; TEXAS A & M UNIVERSITY

Clovis people buried caches of tools. Some stashed points were crafted from exotic stone; others seem too big and thin to have functioned as weapons. One cache (above) was found with a child's bones, suggesting that burying tools could be a ritual act.

CHIP CLARK / NATIONAL MUSEUM OF NATURAL HISTORY, S.I.

last ice age, when so much seawater was locked up in the polar ice caps that the sea level was as much as 300 feet lower than today, ventured across a land bridge from Siberia to Alaska. Then, pursuing big game, the hunters trekked south through present-day Canada. They passed down a narrow, 1,000-mile-long treeless corridor bounded by the towering walls of retreating ice sheets until they reached the Great Plains, which teemed with prey. The human population exploded, and the hunters soon drove into extinction some 35 genera of big animals (see sidebar, p. 94). All of these were supposedly dispatched by the Clovis point, a Stone Age weapon of mass destruction.

For more than half a century, this plausible, "big-game" theory carried with it an appealing, heroic image. As James Adovasio of Mercyhurst College puts it in his book *The First Americans*, it was as if the ice sheets had parted "like the Red Sea for some Clovis Moses to lead his intrepid band of spear-toting, mammoth-slaying wayfarers to the south." But recent discoveries are indicating that almost everything about the theory could be wrong. For one thing, the latest studies show that the ice-free corridor didn't exist until around 12,000 years ago—too late to have served as the route for the very first people to come to America.

Perhaps the strongest ammunition against the old scenario comes from Monte Verde, an archaeological site on a remote terrace, which is today some 40 miles from the Pacific in southern Chile. Here, about 14,500 years ago, a hunting-and-gathering band lived year-round beside a creek in a long, oval hide tent, partitioned with logs. Archaeologist Tom Dillehay of Vanderbilt University began probing Monte Verde in 1977, unearthing the surface of the ancient encampment, complete with wood, plants and even remains of food, all preserved under a layer of waterlogged peat. Dillehay recovered three human footprints, two chunks of uneaten mastodon meat and possibly even traces of herbal medicine (indicated by nonfood plants still used by healers in the Andes). The dating of these extraordinary finds, at least 1,000 years before the earliest Clovis sites in North America, aroused skepticism for two decades until, in 1997, a group of leading archaeologists inspected the site and vindicated Dillehay's meticulous work.

No such triumph has emerged for any of the dozen or so sites in North America claimed to predate Clovis. But among the most intriguing is a rock overhang in Pennsylvania called Meadowcroft, where a 30-year campaign of excavation suggests that hunters may have reached the Northeast 3,000 or 4,000 years before the Clovis era.

EVAN HADINGHAM is the senior science editor of the PBS series NOVA and the author of books on prehistory. PBS will broadcast the NOVA program "America's Stone Age Explorers" November 9.

Saber-toothed cats prowled North America for millions of years. For some reason, they died out about 13,000 years ago.

Hunted to Extinction?

At the end of the last ice age, 35 genera of big animals, or "megafauna," went extinct in the Americas, including mammoths, mastodons, giant ground sloths, giant beavers, horses, short-faced bears and saber-toothed cats. Archaeologists have argued for decades that the arrival of hunters wielding Clovis spear points at around the same time was no coincidence. Clovis hunters pursued big game—their signature stone points are found with the bones of mammoths and mastodons at 14 kill sites in North America. Experiments carried out with replica spears thrust into the corpses of circus elephants indicate that the Clovis point could have penetrated a mammoth's hide. And computer simulations suggest that large, slow-breeding animals could have easily been wiped out by hunting as the human population expanded.

But humans might not be entirely to blame. The rapidly cycling climate at the end of the ice age may have changed the distribution of plants that the big herbivores grazed on, leading to a population crash among meat-eating predators too. New research on DNA fragments recovered from ice age bison bones suggests that some species were suffering a slow decline in diversity—probably caused by dwindling populations—long before any Clovis hunters showed up. Indigenous horses are now thought to have died out in Alaska about 500 years before the Clovis era. For mammoths and other beasts who did meet their demise during the Clovis times, many experts believe that a combination of factors—climate change plus pressure from human hunters—drove them into oblivion.

Amid all the debate, one point is clear: the Clovis hunter wasn't as macho as people once thought. Bones at the Gault site in central Texas reveal that the hunters there were feeding on less daunting prey—frogs, birds, turtles and antelope—as well as mammoth, mastodon and bison. As the late, renowned archaeologist Richard (Scotty) MacNeish is said to have remarked, "Each Clovis generation probably killed one mammoth, then spent the rest of their lives talking about it."

Meanwhile, genetics studies are pointing even more strongly to an early entry into the continent. By analyzing the mitochondrial DNA of living Native Americans, Douglas Wallace, a geneticist at the University of California at Irvine, and his colleagues have identified five distinct lineages that stretch back like family trees. Mitochondria are the cells' energy factories. Their DNA changes very little from one generation to the next, altered only by tiny variations that creep in at a steady and predictable rate. By counting the number of these variations in related lineages, Wallace's team can estimate their ages. When the team applied this technique to the DNA of Native Americans, they reached the stunning conclusion that there were at least four separate waves of prehistoric migration into the Americas, the earliest well over 20,000 years ago.

IF THE FIRST AMERICANS did arrive well before the oldest known Clovis settlements, how did they get here? The most radical theory for the peopling of the New World argues that Stone Age mariners journeyed from Europe around the southern fringes of the great ice sheets in the North Atlantic. Many archaeologists greet this idea with head-shaking scorn, but the proposition is getting harder to dismiss outright.

Dennis Stanford, a Clovis expert at the Smithsonian Institution's Department of Anthropology who delights in prodding his colleagues with unconventional thinking, was a longtime supporter of the land bridge scenario. Then, with the end of the cold war came the chance to visit archaeological sites and museums in Siberia—museums that should have been filled with tools that were predecessors of the Clovis point. "The result was a big disappointment," says Stanford. "What we found was nothing like we expected, and I was surprised that the technologies were so different." Instead of a single leaf-shaped Clovis spearhead, ice age Siberian hunters made projectiles that were bristling with rows of tiny razor-like blades embedded in wooden shafts. To Stanford, that meant no Siberian hunters armed with Clovis technology had walked to the Americas.

Meanwhile, Bruce Bradley, a prehistoric stone tool specialist at Britain's University of Exeter, had noticed a strong resemblance between Clovis points and weapons from ice age Europe. But the idea that the two cultures might be directly connected was heretical. "It certainly wasn't part of the scientific process at that point," Bradley says. "There was no possibility, forget it, don't even think about it." Bradley eventually pursued it to the storerooms of the Musée National de Préhistoire in Les Eyzies-de-Tayac in southwest France, where he pored through boxes of local prehistoric stone tools and waste flakes. "I was absolutely flabbergasted," he recalls. "If somebody had brought out a box of this stuff in the United States and set it down in front of me, I'd have said, 'Man, where did you get all that great Clovis stuff?'" But the material was the work of a culture called the Solutrean that thrived in southwest France and northern Spain during the coldest spell of the ice age, from around 24,000 to 19,000 years ago.

Thousands of years before their successors created the

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masterworks of Lascaux and Altamira, Solutrean-age artists began painting vivid murals in the depths of caves such as Cougnac and Cosquer. They made delicate, eyed sewing needles out of bone, enabling them to stitch tightfitting skin garments to repel the cold. They devised the *atlatl*, or spear thrower, a hooked bone or wood handle that extends the reach of the hunter's arm to multiply throwing power. But their most distinctive creation was a stone spearhead shaped like a laurel leaf.

Apart from the absence of a fluted base, the Solutrean laurel leaf strongly resembles the Clovis point and was made using the same, highly skillful flaking technique. Both Clovis and Solutrean stone crafters practiced controlled overshot flaking, which involved trimming one edge by striking a flake off the opposite side, a virtuoso feat of handiwork rarely seen in other prehistoric cultures. To Bradley, "there had to be some sort of historic connection" between the Solutrean and Clovis peoples.

Critics of the theory point to a yawning gap between the two peoples: roughly 5,000 years divide the end of Solutrean culture and the emergence of Clovis. But Stanford and Bradley say that recent claims of pre-Clovis sites in the southeastern United States may bridge the time gap. In the mid-1990s at Cactus Hill, the remains of an ancient sand dune overlooking the Nottoway River on Virginia's coastal plain, project director Joseph McAvoy dug down a few inches beneath a Clovis layer and uncovered simple stone blades and projectile points associated with a hearth, radiocarbon dated to some 17,000 to 19,000 years ago. This startlingly early date has drawn skeptical fire, but the site's age was recently confirmed by an independent dating technique. Stanford and Bradley suggest that the early people at Cactus Hill were Clovis forerunners who had not yet developed the full-blown Clovis style. They are convinced that many more sites like Cactus Hill will turn up on the East Coast. But the burning question is, Did these ice age Virginians invent the Clovis point all by themselves, or were they descendants of Solutreans who brought the point with them from Europe?

Dennis Stanford (left) and Bruce Bradley say that similarities between Clovis and Solutrean finds (above) are overwhelming.

Many archaeologists ridicule the notion that people made an arduous, 3,000-mile journey during the bleakest period of the ice age, when the Atlantic would have been much colder and stormier than today. Stanford believes that traditional Inuit technology suggests otherwise; he has witnessed traditional seagoing skills among Inupiat communities in Barrow, Alaska. Inupiat hunters still build large skin-covered canoes, or *umiaks*, which enable them to catch seals, walrus and other sea mammals that abound along the frozen edges of the pack ice. When twilight arrives or storms threaten, the hunters pull their boats up on the ice and camp beneath them. Ronald Brower of the Inupiat Heritage Center in Barrow says, "There's nothing that would have prevented . . . people from crossing the Atlantic into the Americas 19,000 years ago. It would be a perfectly normal situation from my perspective."

A different critique of the out-of-Europe theory dismisses the resemblance between Solutrean and Clovis points. Many archaeologists suggest that similarities between Clovis and Solutrean artifacts are coincidental, the result of what they call convergence. "These were people faced with similar problems," says Solutrean expert Lawrence Straus of the University of New Mexico. "And the problems involved hunting large- and medium-sized game with a similar, limited range of raw materials—stone, bone, ivory, antler, wood and sinew. They're going to come up with similar solutions."

More tellingly, in Straus' view, is that he can find little evidence of seafaring technology in the Solutrean sites he has dug in northern Spain. Although rising sea levels have drowned sites on the ice age coastline, Straus has investigated surviving inland cave sites no more than a couple of hours' walk from the beach. "There's no evidence of deep-sea fishing," says Straus, "no evidence of marine mammal hunting, and consequently no evidence, even indirect, for their possession of seaworthy boats."

And David Meltzer, an archaeologist at Southern Methodist University and a critic of the European-origins idea, is struck more by the differences between the Solutrean and Clovis cultures than their similarities—particularly the near-absence of art and personal ornaments from Clovis. Still, he says, the controversy is good for the field. "In the process of either killing or curing" the theory, "we will have learned a whole lot more about the archaeological record, and we'll all come out smarter than we went in."

BESIDES CROSSING THE LAND BRIDGE from Asia and traveling to ice age America from Europe by boat, a third possible entryway is a sea route down the west coast. Using maritime skills later perfected by the Inuit, prehistoric south Asians might have spread gradually around the northern rim of the Pacific in small skin-covered boats. They skirt the southern edge of the Bering land bridge and paddle down the coast of Alaska, dodging calving glaciers and icebergs as they pursue seals and other marine mammals. They keep going all the way to the beaches of Central and South America. They arrive at Monte Verde, inland from the Chilean coast, some 14,500

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Clovis people may well have reached North America via a sea route (perhaps in skin boats larger than this one built by Inuit whalers in Barrow, Alaska). Seals and other marine prey may have sustained them until they found New World hunting grounds.

years ago. Each new generation claims fresh hunting grounds a few miles beyond the last, and in a matter of centuries these first immigrants have populated the entire west coast of the Americas. Soon the hunters start moving inland and, in the north, their descendants become the Clovis people.

Many archaeologists now accept the west coast theory as a likely solution to the origin of the earliest Americans. On Prince of Wales Island in southeastern Alaska, inside the aptly named On Your Knees Cave, University of South Dakota paleontologist Timothy Heaton and University of Colorado at Boulder archaeologist E. James Dixon recovered an accumulation of animal bones from the last ice age. When mile-high ice sheets still straddled the interior of the continent 17,000 years ago, ringed seals, foxes and seabirds made their home on the island. "Humans could easily have survived there," Heaton says.

The ultimate evidence for the western sea route would be the discovery of pre-Clovis human remains on the coast. No such luck. Dixon and Heaton have found human jaw fragments and other remains in the On Your Knees Cave, but those date to about 11,000 years ago—too recent to establish the theory. And what may be the oldest-known human remains in North America—leg bones found on Santa Rosa Island, off the California coast—are from 13,000 years ago, the heart of the Clovis era. Still, those remains hint that by then people were plying the waters along the Pacific Coast.

IF THE TRAIL of the very earliest Americans remains elusive, so, too, does the origin of the Clovis point. "Although the technology needed to produce a Clovis point was found among other cultures during the ice age," says Ken Tankersley of Northern Kentucky University, "the actual point itself is unique to the Americas, suggesting that it was invented here in the New World." If so, the spearhead would be the first great American invention—the Stone Age equivalent of the Swiss Army Knife, a trademark tool that would be widely imitated. The demand for the weapon and the high-quality stone it required probably encouraged Clovis people to begin long-distance trading and social exchanges. The spearhead may also have delivered a new level of hunting proficiency and this, in turn, would have fueled a population spurt, giving Clovis people their lasting presence in the archaeological record.

Sheltering from the broiling heat under the cottonwoods at Gault, Michael Collins told me of his conviction that the Clovis people who flocked to the shady creek were not pioneers but had profited from a long line of forebears. "Clovis represents the end product of centuries, if not millennia, of learning how to live in North American environments," he said. "The Clovis culture is too widespread, is found in too many environments, and has too much evidence for diverse activities to be the leavings of people just coming into the country." Collins reminded me that his team has investigated less than 10 percent of the enormous site. And archaeologists have barely scratched the surface of a handful of other Gault-size, Clovis-era sites—Williamsburg, in Virginia, for instance, or Shoop, in Pennsylvania. "One thing you can be sure," he said, beaming, "there'll be great new discoveries just around the corner."

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What Lies Beneath

A vast world of streets and piazzas, aqueducts and catacombs—rich in history and full of surprises—is drawing more and more visitors to the subterranean reaches of Naples, Italy

BY DAN HOFSTADTER

PHOTOGRAPHS BY ENRICO FERORELLI

Some years ago, out for a stroll in an old quarter of Naples, I suddenly began to feel woozy. The ground beneath me buckled, and the corner of a nearby *palazzo* slumped beneath the sidewalk like the prow of a foundering ship. Alarmed but curious, I walked on, and just as I was summoning up my meager acrobatic skills to cross the wildly rumpled Via Settembrini, I looked down. Beyond the curb was nothing—no gutter, no paving stones, no roadbed, just a gaping, black crevice. I was teetering at the edge of an abyss.

Having lived in Naples off and on for years, I had long known that the city straddles a vast, sepulchral void; but that moment brought it home to me in a particularly dramatic way. From then on I have been acutely aware that beneath the city we see lies another—a sunless metropolis with its own streets and piazzas, marketplaces, viaducts and vividly painted catacombs. People have been tunneling under Naples for 2,500 years, and sometimes it takes only a minor seismic rumble, or, as in this case, a protracted rainstorm, to expose that gloomy netherworld. The narrowest fissure in the pavement can reveal some ancient burial chamber, sewer, well shaft or cistern.

Naples rises out of a bedrock of volcanic tuff, a porous, elastic stone that can support tremendous weight yet is easily hewn and hefted. Greek colonists founded the city in the fifth century B.C., and as their settlement grew, they built a subterranean aqueduct about four miles long, running from springs near Mount Vesuvius to the city's outskirts. The Romans, who took over in 326 B.C., constructed a longer aqueduct, also subterranean, that originated farther to the west. Meanwhile, reservoirs, sewers, transport tunnels and burial chambers proliferated, giving the relatively unresistant Neapolitan substrate a spongelike quality. During the period of Spanish rule, which began in A.D. 1503, a Neapolitan nobleman threaded yet another aqueduct through the underground in 1629, and a fourth, outfitted with pressurized tubing, was cut in the late 19th century.

All the while, quarries beneath Naples were being excavated for tuff, the early town's principal building material. The hollowing-out left a void approximately equal to the city's total mass. This sprawling subterrane is often characterized as Naples' belly or "womb" and is associated in the popular imagination with the immortality of the soul. Virgil, who spent his last years in Naples, surely had it in mind when he recounted Aeneas' descent into Hades in the *Aeneid*. Regularly used in burials after the triumph of Christianity, the underground came to be linked with a cult of the dead that has persisted to today.

Most cities are at least partly hollow underneath. But the Neapolitan underground is so big, so old, and in parts so sumptuously decorated that it ranks among the wonders of the world. Voluminous, mazelike and endlessly forking, it encompasses five systems of early Christian catacombs; extensive transportation tunnels, wide enough to accommodate oxcarts and chariots; and innumerable cisterns and well shafts, many linked by subsidiary watercourses. In these infinite windings, the contemporary visitor encounters every sort of space—from cramped burrows to soaring, vaulted chambers, from caverns used as parking lots to a recently excavated forum. About ten years ago, I was led into a fossilized Greco-Roman theater through a trapdoor under a bed.

Yet much of the subterrane has long been inaccessible. Parts were closed off in 1885, when a cholera epidemic required a rechanneling of the city's water supply. Sections were opened during World War II as bomb shelters and were then abandoned after 1945 by a population eager to forget the war's privations. The resulting neglect, which poses serious dangers to many buildings, has continued to the present.

A partial reclamation of the Neapolitan underground started in the late 1970s, and though I have followed this en-

The city of Naples (above, with Mount Vesuvius in the distance) sits atop a vast complex of ancient markets, cisterns, crypts and tunnels. Opposite: Entrepreneurs like speleologist Enzo Albertini (top left, outside his underground tour establishment) have opened sections of that netherworld to tourists. Visitors can enter Albertini's domain via the main stairway (bottom left) or descend into his Greco-Roman theater through a trapdoor (top right). Numerous skulls (bottom right) can still be found in the crypts below the city.

NAPOLI
SOTTERRANEA

terprise for about 15 years, I soon recognized that the netherworld consisted of so many networks, from so many historical periods, that it could not be visited (much less mentally grasped) in a month or even a year. No sooner has one section of a tunnel been opened to the public than a catacomb must be closed on account of the humidity level. Restorations in this part of the world are never truly complete.

Over the years, however, I have managed to see a great deal, and my descents have left me with kaleidoscopic impressions of an endless succession of Plutonian chambers—some dank and dripping, others powdery and airless; some black as pitch, others illuminated by clerestories pierced in the rocky overhead vaults. I have seen skulls embedded in masonry, and crypts where corpses once sat upright, as if in a railway station waiting room. I have seen, scratched into the walls of cavities under the Via Chiaia, beguiling stylized drawings executed during the war, probably by designers or tailors; and, on one occasion, I happened on the aftermath of a raid by the police, who had discovered contraband cigarettes in an underground vestibule.

The more I poked into underworld lore, the more I discovered that many people I knew had access to it. One friend, the owner of Al Plebiscito, a restaurant near the royal palace, told me that it was rumored during the late 1920s that Italy's crown prince Umberto used a secret passage from the palace to the restaurant for romantic assignations. Another acquaintance, an antiques dealer, had unearthed, beneath his palazzo, a massive 18th-century ceramic plaque portraying one of the great figures of the Enlightenment, Neapolitan philosopher Giambattista Vico.

My wanderings bewildered me: I felt both enchanted and disoriented, and when I emerged into daylight, rubbing my eyes, I often discovered that I'd poked out from beneath the stairway of some Baroque facade or, more typically, into the back of a poultry shop. (For some reason, poultry shops almost always have a flight of steps into the world below.) Every chamber seemed connected by some secret corridor to every other chamber, and all business meddled in every other business; nobody stood on truly solid ground.

The Catacombs of San Gennaro are the jewel of the Neapolitan subterrane. Religious communities carved out many such burial chambers just beyond the city walls during the first centuries of the Roman Empire, and this particular system of cavities—though long ago engulfed by the expanding metropolis—has survived fully (if moistly) intact. On descending into its chilling precincts, I always feel I've entered a sort of underground cathedral, since its central, navelike ambulatory is flanked by a number of smaller chapels. Though the catacombs' domes and asymmetrical arches suggest an Expressionist stage set, precious mosaics and murals adorn its vaults, and what remains of frescoed funerary portraiture never fails to startle me. These naturalistic painted heads date back to the fourth century A.D., when Neapolitans apparently desired likenesses of their dear departed. Thus I've been able to commune across the ages with the glum-looking Teotecnus family—with dour-faced Vitalia, and with a diminutive personage whom I call Nicatiola the Big-Haired (flamboyant coiffures being by no means confined to our own era).

NOT ONLY WAS the subterrane virtually abandoned after 1945, but its wells and cisterns were nearly filled with the rubble of bombed-out buildings wreckers were clearing to make way for new structures. The sub-level maze became obstructed and unsafe, and most of its entryways were eventually sealed off.

Then, one day in 1979, a fire broke out in a cabinetmaker's workshop in a steep street called the Gradoni di Chiaia. "It started," my friend Michele Quaranta once told me, "when a carpenter dropped a lighted piece of paper into a basement well shaft to see how deep it was, and something caught fire." Smoke billowed out of the well, Michele recalled, and then out of the workshop's doors and windows. The conflagration, which nobody could douse or even see, raged on for two weeks, until Michele and his younger brother Salvatore, who had both grown up in the neighborhood, went down to have a look. The blaze, they discovered, fed on the sheer volume of flammable material thrown into the underground during the preceding decades.

I first met Michele during one of my twilight rambles in the casbah-like neighborhood called the Quartieri Spagnoli. Crossing the Via Santa Teresella degli Spagnoli, I saw, inside a tiny garage, a middle-aged man sitting at a desk in a pool of light. I gazed at him for a moment, whereupon he glanced up and, in typical Neapolitan fashion, motioned for me to

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DAN HOFSTADTER is the author of a book on contemporary life in Naples to be published by Knopf. Frequent contributor ENRICO FERORELLI photographed Puppies Behind Bars for the August issue.

The Catacombs of San Gennaro (illustration above) date back to the second century A.D. Their walls are decorated with early Christian frescoes and mosaics. Naples' beloved patron saint, Gennaro, was buried in these tombs in the fifth century.

F.P. AVERSANO FROM THE BOOK: GROTTE E CAVERNE DI NAPOLI: LA CITTÀ SOTTO LA CITTÀ, QUARTA EDIZONE: GENNAIO 1998 TASCABILI ECONOMICI NEWTON DIVISIONE DELLA NEWTON & COMPTON EDITORI S.R.L (ROMA), 1994

come in. Michele, I soon learned, was known in the quarter as "he of the underground." That evening he told me that he had pursued an avocation as a speleologist, and that he had intimate knowledge of the tunnels that meandered through the city's rock foundation. He was trim and wiry, and limber as a ferret, with a trick of jabbing the air with his chin to nail down an argument.

The pensive, scholarly Michele was often joined in his curious garage-workroom by Salvatore—stocky, ruddy-faced and naturally explosive. Salvatore didn't so much speak as hammer out his words, often sharing tidbits of local gossip or folklore. The pair fascinated me, and for a long time, if I was anywhere near Michele's place in the early evening, I would drop by. With its pinned-up archaeological photographs and charts of the city's underground corridors, it seemed itself a journey back in time. Of course, it had its own stairway into the netherworld.

The brothers told me that before the war the so-called Spanish church, which stood next to the woodworking shop where the fire had started and is now boarded up, was still used for worship. Neighborhood children, they said, whispered among themselves that a "sacred land"—their term for a crypt—lay beneath it.

The Quaranta brothers' own obsession with Naples' subterrane had been fueled by the fire. The dense pall of smoke that veiled the streets and seeped into shops and homes had reminded them of playing hide-and-seek in the underground as boys. "Later," Michele told me, "we did a little juvenile spelunking, stealing down back stairways, squirming into the warren of half-obstructed passages that lay beneath our neighborhood. And there we discovered that many of them led to cavernous, vaulted cisterns, which communicated laterally with other cisterns." Crawling like inchworms from one chamber to the next, the boys found that they could also climb up abandoned wells until they nosed into people's flats at street level. One time they came through a door and scared the wits out of a housewife; another time they had to scamper into an armoire to hide from the tenants.

Though the Gradoni di Chiaia fire had broken out more than 20 years after these youthful escapades, the brothers had not forgotten the tunnels, and it now occurred to them that they could reach the blaze through one of them. With Clemente Esposito, a mechanical engineer who headed a local speleological society and had studied the city's buried watercourses, the two brothers climbed down a spiral stairway in a former well, used during the war to reach a bomb shelter. "Eventually we found a vantage post under the fire," Michele told me. "There it was comfortably cool, because all the heat was rising, and there we figured out why the work-

One of the many ancient treasures discovered in the Naples underground is a Greek hypogeum, or tomb, that sits beneath a palace in the Sanità quarter of the city. The tomb still boasts remnants of its carved reliefs and frescoed decorations.

shop continued to pour out smoke." It was a matter of deduction. The Quarantas knew that the fire had started from that scrap of paper tossed into a well—and that the flame must have fallen into a cistern filled with decades of sawdust and wood shavings from the shop. The flame had ignited this detritus, and the underground fire had spread sideways, into refuse-choked spaces that no amount of water from above could reach. The brothers concluded that the blaze had to be attacked from the side; which was how, in the end, the firemen put it out.

After the fire was extinguished, the Quarantas had an idea: Why not turn Hades into a paying attraction? Here a mere collection of cavities—emptiness itself—could be turned into a source of hard cash. The pair got in touch with Ettore Massarese, a well-known set designer, and with his help they mounted a subterranean show called "Dea Demetra," after the Greek goddess of the earth. For a small fee, the audience was conducted along an underground trail lighted by torches and marked off by imitation Greek statues. The attraction became such a hit that the brothers wanted to enlarge it. But there was a problem: many of the tunnels were filled with refuse.

To get rid of the debris, the pair hit on an ingenious scheme. Michele began promoting their venture at the Italian Army district headquarters, the university, in public schools and at the American officers' Archeo-Club at the NATO base north of the city. Soon curious groups began to book tours. The visitors, including entire classes of high-school students, would descend into the pair's tenebrous domain, be escorted around, and then be cajoled into carrying big bags of trash, two per person, back up to street level. "In this way, over several years," Michele told me, "we got the system cleared out. And for this we received no public support—not one lira."

The Quarantas were not alone in their rediscovery of the Neapolitan underworld. Across town, in the Greco-Roman historic center, a speleologist named Enzo Albertini was also exploring the city beneath the city. Albertini was considerably younger than the Quarantas—he's now 45—and he got started a little later, in the 1970s. For him the most logical approach, with respect to both history and tourism, was to delve straight down beneath the hub of the ancient city, where the Roman forum and open-air amphitheater once stood. So he bought an artisan's workshop in the shadow of the great church of San Paolo Maggiore (built on the site of a Roman temple whose magnificent colonnade had survived intact until the earthquake of 1688) and began to clean out a network of spacious chambers accessible from the workshop's basement.

Albertini is the most theatrical person I have met in a city that is full of theatrical people. Tall and physically powerful, he gestures freely with his large hands, his eyes imploring heaven or focusing intently on yours. His voice ranges from an oratorical pitch to a pathos-laden whisper. And he treats all subjects with nearly equal passion, from the municipality's refusal to acknowledge his obvious contribution to the restoration of Naples' patrimony to the Roman emperor Nero's narcissistic performances on the Neapolitan stage.

"Underground Naples has always obsessed me," he once told me. "Our kitchen had a door that opened on an ancient, disused well shaft, and every now and again I would hear the lady upstairs open the corresponding door in her kitchen. This sound would always be followed, a few seconds later, by the thump of some unwanted item striking the bottom of the shaft many yards below." The thought of secret corridors going out in all directions haunted Albertini's boyhood imagination, and by age 18 he was a devoted urban adventurer. He joined Clemente Esposito's speleological society, though differences would later end their friendship, and he ranged all over the city. He even located a subterranean cave in the suburb of Poggioreale and identified it, on the basis of the paintings and graffiti on the walls, as a Greek burial chamber.

By 1992, Albertini had cleared out a splendid system of cisterns, quarries and wells, including man-made, narrow vertical channels—called *cuniculi* in Latin—through which the ancients forced water to maintain pressure. In succeeding years, he also unblocked portions of the adjacent Greco-Roman

Underground cisterns (left), accessed from well shafts, were used to collect and store water for Neapolitans in Greco-Roman times. Amateur speleologist Michele Quaranta (above) has been leading tours of the city's subterrane for 16 years.

theater, on whose stage, he told me, the emperor Nero, ever avid for glory, had performed as an actor, more than a decade before Vesuvius' cataclysmic eruption in A.D. 79.

In 2002, Albertini received a commission from the city to repair and restore the Cemetery of the Fontanelle, a place so peculiar as to require a word of explanation. There are in Naples certain underground chambers connected almost exclusively with a cult of the dead. The vast quantity of unidentified cadavers returned to the city by the end of World War I revived an ancient custom of "adopting"—garlanding, praying over and perhaps even polishing—a chosen skull. The ossuary of the Fontanelle contains tens of thousands of such skulls, many arranged in makeshift shrines or tabernacles.

This folk offshoot of Catholicism once included rich as well as poor Neapolitans. But distressed by its pagan overtones, the local diocese banned it in 1969 and closed the Fontanelle. The diocese also closed the crypts of two downtown churches similarly devoted to the cult of the dead. In time, however, sensibilities changed, and Enzo Albertini and his team have now braced stone arches with steel in preparation for reopening the Fontanelle as a museum. Meanwhile, the centrally situated crypt of Santa Maria delle Anime in Purgatorio ad Arco, which is filled with skulls and bones, many of them preserved in open cookie tins and bedecked with flowers, is now open one day a week. Often, passing by on the street above the crypt, I see marigolds and chrysanthemums lovingly stuck into the gratings that overlook the lurid ossuary. A few blossoms inevitably fall through onto the marble floor below.

WHAT DOES THE FUTURE HOLD for the Neapolitan subterrane? The answer is complex. The centuries-old system of storm drains and sewer runoffs remains heavily overburdened, exacerbated by a post-World War II construction boom that saw the building of huge, shoddily constructed apartment houses over inadequate waste conduits. For decades, Eleonora Puntillo, a journalist who formerly headed the Naples bureau of the now defunct national newspaper *Paese Sera*, has been drawing attention to this problem. "What happens," she told me, "is that when the sewers fill up with moving water, fragments of the vaults' walls get swept away. As a result, they weaken and may eventually collapse altogether, drawing the street pavement into the resulting sinkhole." And indeed, vehicles, buildings and even people have pitched into these sudden chasms, with considerable loss of life. Yet the sewer network may soon become safer, thanks to grants from the federal, regional and municipal governments, and a $13.4 million loan from the European Investment Bank.

The sewers and underground waterways of Paris, though not as old as those of Naples, have been rehabilitated as a tourist attraction, to the envy of many Neapolitans. In 1988, the state petroleum company, AGIP, invited a group of European architects to design various schemes for a restored Neapolitan underground. Among those presented were a proposal for a system of picturesque canals plied by tourist boats, and a plan to turn the entire subterrane into a sort of greenhouse fueled by solar energy. Neither of these ideas has gone forward, but part of the Crypta Neapolitana, a Roman tunnel that stretches .43 miles from Naples to the town of Pozzuoli, has been turned into an exhibition space for artists. And a remote-controlled video camera, called Gennarino, has been turned loose by the city to hunt for damage in the sewer network. At last word, according to one source, Gennarino had inspected 170 miles for leaks and cave-ins.

The underground, always a useful place to hide contraband and illegal weapons, continues to entice the lawless. In April 2002, three "mole-men," as they were dubbed by the *Il Mattino* newspaper, suddenly materialized in the city's central post office, which is also a branch of the government savings bank. The mole-men were intercepted by the police before they could get their hands on the roughly half million dollars they were after, but they vanished back into the sewers, leaving behind three backpacks, some cookies and containers of mineral water.

Naples is a beautiful, wounded and fragile city—and its glories are at constant risk, and not just from the elements. Progress to reclaim the catacombs, crypts, watercourses, cisterns and great Roman ruins would undoubtedly go faster if the various champions of the subterrane could learn to get along. I sometimes think that if they had put the energy they expend feuding with one another into reclaiming the underground, they would be a lot further along. But then I recall the many ancient myths that feature an underworld passage, into which the hero must descend in order to realize his destiny—one thinks of Theseus, Odysseus, Aeneas. Though he inevitably succeeds, he never does so without a struggle.

During World War II, Naples residents sought refuge from the Allied bombing in underground cisterns (above); after the war, they filled them with rubble. Emperor Nero performed in a Greco-Roman theater (right, its lower galleries) in A.D. 64.

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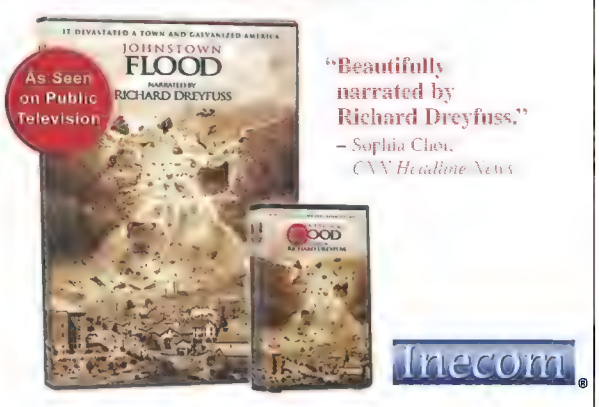
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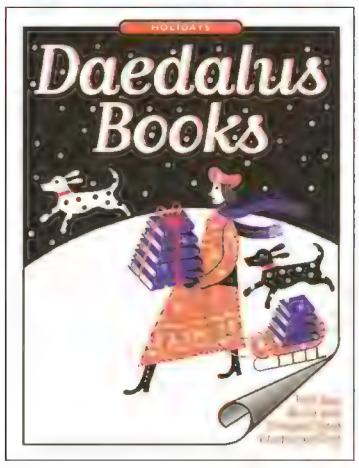

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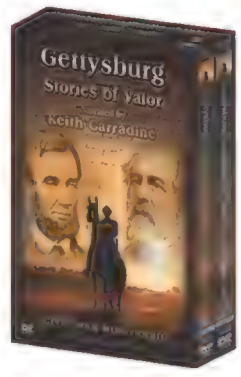

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Art That Goes Boom

Fireworks, exploding balloons, skywriting: Cai Guo-Qiang's sizzling works defy gravity and expectations ~ BY ANN WILSON LLOYD

In addition to his public art events, Cai Guo-Qiang (in his Manhattan studio) makes drawings that he creates by igniting gunpowder on paper. The three works above were done in conjunction with an explosion project he orchestrated last winter in Egypt.

ON A GRITTY STREET in downtown New York City, a bright red door gives way to another world—the elegant, serene studio of Chinese-born artist Cai Guo-Qiang (pronounced sigh gwo chang). Since moving to the United States in 1995, the 46-year-old Cai has been acclaimed for the startlingly original and unlikely public art projects he has staged around the world with explosives and precision pyrotechnics.

In London, he danced a fiery dragon-shaped line of burning gunpowder across the Thames' Millennium Bridge, then over the facade of the Tate Modern museum and up its tower. In China, he symbolically extended the Great Wall six miles into the Gobi desert with lines of blazing gunpowder fuses laid across the landscape. He flashed a monumental rainbow bridge of fireworks over Manhattan's East River (to mark the Museum of Modern Art's temporary relocation to Queens). And last year he hung a 1,000-foot-high revolving halo of white titanium fireworks salutes over New York's Central Park (to celebrate its 150th anniversary). *New York Times* critic Holland Cotter wrote beforehand that it would display Cai's "spacious, macrocosmic, even galactic view of the world."

In contrast to his loud, flamboyant artworks, Cai himself is low-key and affable. He and his wife, Hong Hong Wu, who works with him, sometimes cook lunch for visitors in his studio's sleek kitchen, or put them up in guest quarters tucked behind a garden atrium. One recent morning, Cai sat near the atrium, amid stacks of books, quietly sketching with a pencil. He and Hong Hong have two daughters—14-year-old Wenyou and one-year-old Wen Hao,

Cai says he likes to think of using fireworks in new ways. "Why not do fireworks for very few people?" he asks. "Why not do them at midnight in some unknown place far away? Or why not do them during the day in full sun?"

TIMOTHY BELL

who played nearby on a blanket on the floor. At this moment, nothing about the artist resembled an impresario of pyrotechnic productions, but three staff members in an adjacent office worked a bank of computers and phones. When the studio's director, Jennifer Ma, who acts as a translator for Cai, said things are not always so peaceful, Cai, who knows some English, just laughed. Among other things, he is getting ready for exhibitions at the Smithsonian's Arthur M. Sackler Gallery and at the Hirshhorn Museum and Sculpture Garden, both in Washington, D.C.

In 2002, Cai exploded a rainbow over Manhattan's East River.

Lately he's also been sketching old-fashioned sailing ships in craggy harbors in preparation for a piece he's titled *White Nights*, planned for next summer in Venice and Norway. Handing over a travel guide to Norway's Lofoten Island chain, he said, "We'll be bringing a gift to people who live in these remote island villages above the Arctic Circle—shipboard fireworks displays during the pale twilight of the midnight sun." The plan, surprisingly ambitious given the small number of people—perhaps a hundred—who are expected to view the results, calls for Norwegian sailors and shipbuilders to go to China this winter, where they'll work with Chinese counterparts to refurbish a wooden, three-masted sailing vessel. The ship, about 66 feet long, will be transported by cargo container to Venice and unveiled there next summer (at the Venice Biennale exhibition of contemporary art) before embarking on a five- to six-week-long voyage north to the Lofoten Islands. "We will be taking the ancient Viking route partway, which once brought violence and fear," Cai says. "But now we will come from so far away, through so many oceans, just to bring pleasure."

Cai says he likes to think up new ways of using fireworks: "Why *not* do

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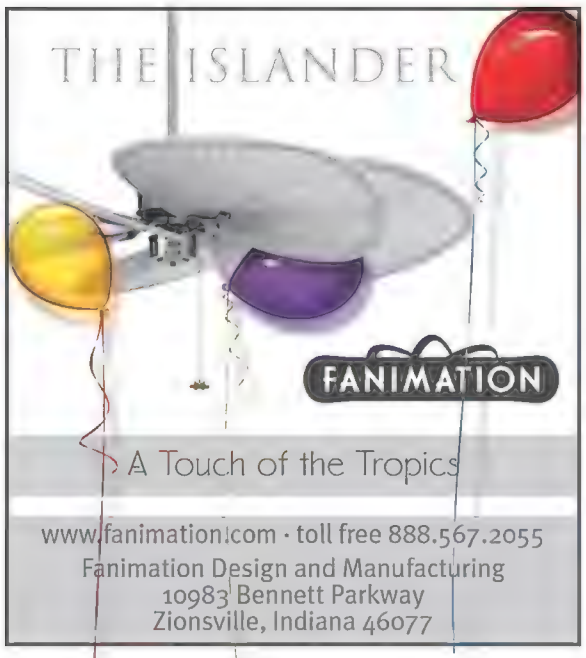

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fireworks for very few people? Why not do them at midnight in some unknown place far away? Or why not do them during the day, in full sun?"

In fact, daylight fireworks are in store in January 2005 for Spain's Valencia Institute of Modern Art. Cai had been asked to do a project there some time ago, but in light of the world's violence, including the bombing of commuter trains outside Madrid last March, he wondered how he could make fireworks meaningful, even relevant, in Spain. Rather than the expected night display in glittering colors, he plans to set off *Black Fireworks*—typical pyrotechnic forms such as chrysanthemum bursts rendered in black smoke against a daylight sky.

CAI WAS BORN in Quanzhou, in China's southeastern province of Fujian, and he says his most important artistic influence is the ancient port city's historic role, since the days of Silk Road trading, as a peaceful cultural and ethnic crossroads. His father, a landscape painter and calligrapher, worked in a state-run bookstore. His mother was a homemaker. As a teenager, Cai studied martial arts and appeared in a few kung fu films. He had always dreamed of becoming an artist, and when he read about the work of Western conceptual artists in journals that filtered into China through Hong Kong, he realized that art could be much more than traditional painting and sculpture—it could be almost anything. Since no Chinese art school at the time offered classes in contemporary art, he studied stage design at the Shanghai Drama Institute instead.

To inject an element of unpredictability in the oil paintings he was doing in the 1980s, Cai, still in China, began experimenting with gunpowder. Then, in 1986, he moved to Japan and began to use it in public art events. In Hiroshima in 1994, he ignited 6,150 pounds of gunpowder contained in packets attached to 114 helium balloons. The balloons were tethered in wide, spiraling circles descending toward the ground. A long fuse ran from

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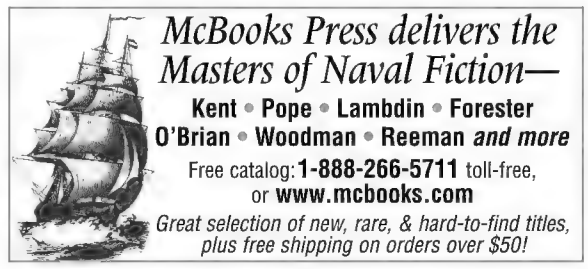
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the gunpowder packets to a pit in the ground. When detonated, the individual flashes created brilliant rings of fire in a cone formation. The effect, the *Times*' Cotter wrote, "was of fiery energy sucked into the earth, a mushroom cloud in reverse."

The following year Cai took an old Chinese junk full of herbal medicines from Quanzhou to Italy and sailed it up the Grand Canal as part of the Venice Biennale. Titled "Bring to Venice What Marco Polo Forgot," the piece marked the 700th anniversary of the Italian explorer's return to Venice from the East. Cai's work is "epic," *ArtNews* critic Carol Lutfy wrote, adding, "It melds the disciplines of geography, science, art, history and medicine," not to mention "stage design, narrative, drawing and installation."

One of Cai's most challenging schemes is scheduled for October 15 in California. Commissioned by the San Diego Museum of Art, the project will be part of the annual air show at the nearby Marine Corps' Miramar air station. "During this spectacular showing of military power," Cai explains, "six planes will streak across the sky, and you will suddenly see these mountains being sketched out with skywriting. And then four planes will dive down the center to make a waterfall, and divert to either side, creating streams. It will be a traditional, Chinese landscape, a very beautiful, poetic image hanging momentarily in the sky until the smoke drifts away." Civilian stunt pilots will fly the planes for Cai, who hopes that the art-in-the-sky will startle viewers out of a *Top Gun* state of mind and into peaceful contemplation. "And that," he says, "is enough to make it worthwhile."

In London in 2003, Cai blazed a fiery dragon across the Thames River.

Cai is enthralled by flight, space and the potential of life beyond our solar system. Indeed, he often dedicates his projects to extraterrestrials, who, he likes to imagine, may glimpse his works from outer space. But for now, anyway, he himself remains earthbound. "I only ride a bicycle," he says. "I don't even drive a car, but in my heart, I am flying the space shuttle."

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Not all of Cai's works explode, and not all of his ideas fly. His installation at the Sackler Gallery (October 30-April 24, 2005) will feature the remains of an old wooden Japanese boat, resting on a "sea" of white china fragments from a venerable porcelain factory in Dehua, China, near his hometown. He was inspired by the Sackler's collection of prized Asian ceramics and by how the art and ideas of different cultures have historically been spread through trade. Concurrently, at the Hirshhorn, the artist will be showing recent plans that never made it beyond his red studio door. Among them are renderings of a computerized fireworks project for Paris that would have created a 1,000-foot-high outline of a red pagoda alongside, and equal in height to, the Eiffel Tower.

The Hirshhorn show will also feature several of what Cai calls his gunpowder drawings, which he makes by dribbling lines of gunpowder on large swaths of Japanese paper, covering them with cardboard weighted down with stones, then lighting a fuse. The burning gunpowder etches the paper with surprisingly delicate traceries in black, reddish browns and yellows. The drawings, though often abstract, have the dreamy quality of a southern Chinese landscape painting and exemplify Cai's pursuit of beauty through explosive forces. This seemingly contradictory aim underlies much of his work, and is traceable, he says, to the Chinese philosophy of Taoism, which holds that everything on earth consists of invisible energy, or *chi*, and that chaos is the true state of being.

Cai himself says that it's not just the flashy, pyrotechnic spectacle that's important. "It's that single, cataclysmic moment when matter turns into energy and creates a momentary spatial and temporal chaos." He adds that he doesn't much care whether that energy comes from a line of gunpowder or from a titanium shell salute: "It's the explosion," he says, "that matters."

ANN WILSON LLOYD is the Boston corresponding editor for Art In America.

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One of the Vietcong guerrillas killed in the attack on the U.S. Embassy turned out to be a former driver for the U.S. ambassador.

DICK SWANSON / TIME LIFE PICTURES / GETTY IMAGES

Tet: Who Won?

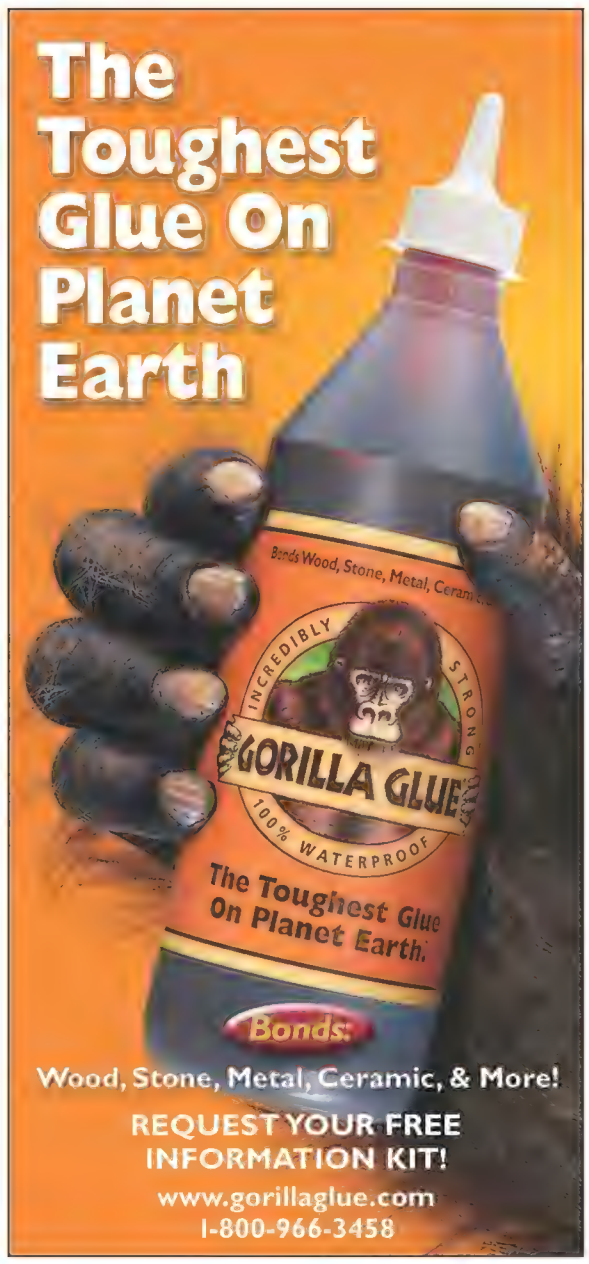
A North Vietnamese battlefield defeat that led to victory, the Tet Offensive still triggers debate nearly four decades later ~ BY DON OBERDORFER

SHORTLY BEFORE 3 A.M. on January 31, 1968, a squad of Vietcong guerrillas blasted a hole in the outer wall of the U.S. Embassy compound in Saigon, gunned down two American military policemen who tried to stop them, and laid siege to the lightly defended headquarters building where the flag of the United States was officially planted in South Vietnam.

As part of a nationwide wave of surprise attacks by the Communists during the Lunar New Year—the Tet holiday—the resulting six-hour battle was militarily inconsequential. In fact, in strictly military terms, the two-month struggle known as the Tet Offensive was a disaster for the attackers. It ended with the expulsion of the North Vietnamese Army and the southern-based insurgent troops, known in the West as Vietcong, from each place they invaded.

In the theater of public opinion in the United States, however, the attacks were a great success for the North Vietnamese. Brought into the living rooms of Americans by new communications satellites over the Pacific, scenes of the carnage, particularly at the embassy, severely damaged national confidence in the war policies of President Lyndon Johnson, who was already under fire from a frustrated citizenry in a presidential election year. The dramatic developments set in train during Tet led eventually to the withdrawal of American forces and the collapse of South Vietnam.

Tet was a historical anomaly: a battlefield defeat that ultimately yielded victory. This remarkable result accounts for Tet's resonance whenever U.S. military forces meet even temporary reverses. In the 12 months after Baghdad fell in April



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In Ben Tre, an unnamed U.S. major famously told Peter Arnett of the Associated Press that "it became necessary to destroy the town to save it."

2003, for example, more than 200 stories in major English-language newspapers referred to the Tet Offensive. And faced with a flare-up of attacks in Iraq this past June, Secretary of Defense Donald Rumsfeld told a radio interviewer that he had no doubt the insurgents had "read about Tet and the fact that if they make a big enough splash, even though they get a lot of people killed and we pound them, they end up winning psychologically."

NEARLY FOUR DECADES after the battle, Tet still provokes sharp debate. Why did the attack come as such a surprise? Did the American press misreport a U.S. victory as a defeat? Such questions drew more than three dozen historians, some unborn when the battle took place, to reassess the Tet Offensive at this year's meeting of the Society for Military History in Bethesda, Maryland. (As a correspondent for the Knight newspapers during Tet and author of a book on the subject, I was invited to participate.)

At the time of the Tet Offensive, I had been covering the Vietnam War for three years, ever since Johnson dramatically raised the U.S. stake in the war by sending in ground combat troops. After arriving in Saigon on January 1, 1968, for my third extended visit to the war zone, I made plans to go at the end of the month to neighboring Laos in order to escape the journalistic void that would likely envelop Vietnam during Tet, the Lunar New Year and by far the most important national and

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Watching Walter Cronkite's post-Tet reports on CBS-TV, LBJ said, "If I've lost Cronkite, I've lost Middle America."

family holiday for Vietnamese. But when I got to Laos, a British doctor told me that "the Vietcong have taken over the U.S. Embassy in Saigon" (news that was a gross exaggeration). Commercial flights to Vietnam were shut down, but I was able to reach a silent and demoralized Saigon on a U.S. military aircraft three days after the battle began. By then, the city was filled with the odor of rotting garbage and, here and there, the stench of the dead.

During the weeks that followed, I traveled widely. In the former imperial capital of Hue, I covered the bloody fighting of U.S. Marines and South Vietnamese troops and the North Vietnamese regulars who held the citadel of the former Nguyen emperors for 25 days before being driven out. It was in Ben Tre, a provincial capital in the Mekong Delta I visited on February 7, that an unnamed U.S. major famously told Peter Arnett of the Associated Press that "it became necessary to destroy the town to save it." Nearly everywhere I went, the lack of preparedness for the extraordinary attacks was an important part of the story.

We did not know then—and only learned with publication in 1988 of historical documents in Hanoi—that the North Vietnamese Politburo had decided as early as June 1967 to aim for a decisive battlefield victory in 1968, a U.S. presidential election year. The following month the Politburo approved

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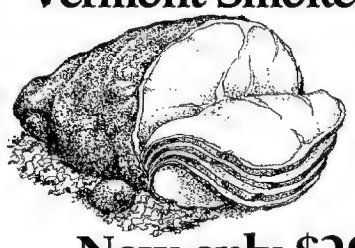

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EDDIE ADAMS / AP / WIDE WORLD PHOTOS

Eddie Adams' photo of the execution during Tet of a Vietcong officer by South Vietnam's police chief, Nguyen Ngoc Loan, won a Pulitzer Prize in 1969. Adams died this past September at age 71 of Lou Gehrig's disease. After the war, Loan opened a pizza parlor in Dale City, Virginia. He died at age 67 in 1998.

a plan for simultaneous surprise attacks on Saigon and other urban areas of the South. In October 1967, according to the official history published in Hanoi, the Politburo decided that the attacks would begin during the Tet holiday, then only three months away.

Although the Communists tried to keep the offensive a secret, such an audacious project—67,000 troops attacking more than 100 targets—was bound to leak out. In mid-November, U.S. forces captured an early version of the attack plan, which declared that on an unspecified date, "troops should flood the lowlands" including Saigon and other urban areas in coordination with uprisings of the local population. The U.S. Embassy in Saigon actually distributed a translation of the Vietnamese document 25 days before the embassy was attacked; it was widely discounted. On the copy I picked out of a bin at the embassy press office, I expressed my own skepticism in longhand: "moonshine." Though the U.S. military command had ordered American forces on "maximum alert" on the eve of the holiday, many officers did not take the threat seriously. In fact, the very night the Tet attacks began, some 200 U.S. colonels, all assigned to the intelligence branch of the U.S. command, went to a party in downtown Saigon.

As the Communists prepared their attacks, the White House was setting

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itself up for a political disaster with a misguided "success offensive," claiming that victory was in sight. From the flight deck of the aircraft carrier USS *Enterprise*, President Johnson declared that the war would continue "not many more nights." Most tellingly, Gen. William Westmoreland, the handsome, square-jawed commander of U.S. forces in Vietnam, said before the National Press Club in Washington, D.C.: "With 1968, a new phase is now starting. We have reached an important point when the end begins to come into view."

In this context, the Tet attacks came as a particular shock. James J. Wirtz, a historian at the Naval War College who has closely studied the 1968 offensive, declared at the Bethesda conference that Tet was "an earth-shattering, mind-shattering event that changed the course of the war." Though the Politburo in Hanoi achieved neither the decisive victory on the battlefields nor the uprising by the Vietnamese people they had hoped for, they were able, as North Vietnamese Communist Party chief Le Duan had forecast in a letter to his southern fighters, to "shake the aggressive will of U.S. imperialism, compel it to change its strategy and de-escalate the war."

My friend and former *Washington Post* colleague, the late Peter Braestrup, blamed misreporting by the American press for the impact of Tet on the American public, citing "a portrait of defeat for the allies" that emerged from journalistic accounts. Many high-level military officials shared Braestrup's view, stimulating efforts by the post-Vietnam Pentagon to restrict press coverage of military operations.

I disagree. Unquestionably, there was misreporting of Tet, especially in the confusing and uncertain days following the attacks. In retrospect, some of my own reporting was too pessimistic, partly because I was misled by a CIA official who was trying to claim control of the delta for his agency.

But press reports were not the fundamental cause of the loss of domestic support for the war. In my view, the story of the Vietnam War can be summed up in an observation made by North Viet-

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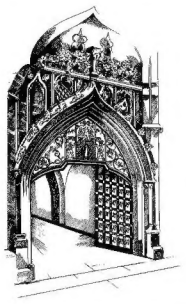

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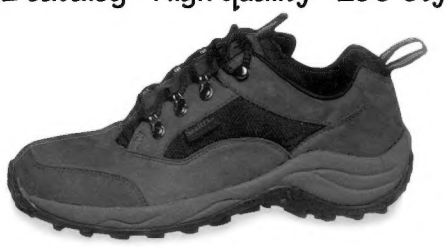

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namese premier Pham Van Dong, Ho Chi Minh's close aide and successor, to French war historian Bernard Fall in 1962, three years before the massive U.S. intervention and nearly six years before Tet: "Americans do not like long, inconclusive wars—and this is going to be a long, inconclusive war. Thus we are sure to win in the end." The North Vietnamese and their southern comrades were willing to fight to the death against the United States and the government it had installed, just as they did against the colonial French, who had tired of fighting and sued for peace. And this time, China, which had pushed the Vietnamese Communists to partition their country into North and South to end the first Indochina War in 1954, was fully on their side, as was the Soviet Union.

Despite the heavy Communist losses, Tet dramatically reinforced the view that there was no end in sight. When LBJ continued to insist, after Tet, that the war effort was still on track, his message was undercut by a leak of General Westmoreland's request for 206,000 more U.S. troops. This news, just two days before the March 12 presidential election primary in New Hampshire, further eroded Johnson's already dwindling credibility. Not long after his poor showing in New Hampshire, the president announced that he would not seek a second full term. And, he said, he had stopped the bombing of most of North Vietnam in a bid for peace talks. Richard Nixon, Johnson's successor, won the election by promising "peace with honor." Once in office, Nixon was able to sustain support for the war only by withdrawing increments of American troops every few months, and then negotiating a peace agreement that required full U.S. withdrawal. Seven years after the ill-fated Vietnamese sappers attacked the U.S. Embassy on Tet, the last Americans, and some of their Vietnamese allies, departed Saigon by helicopter from the building's roof on April 30, 1975.

DON OBERDORFER, author of Tet!, *is journalist-in-residence at Johns Hopkins School of Advanced International Studies.*

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Wish I'd Thought of That

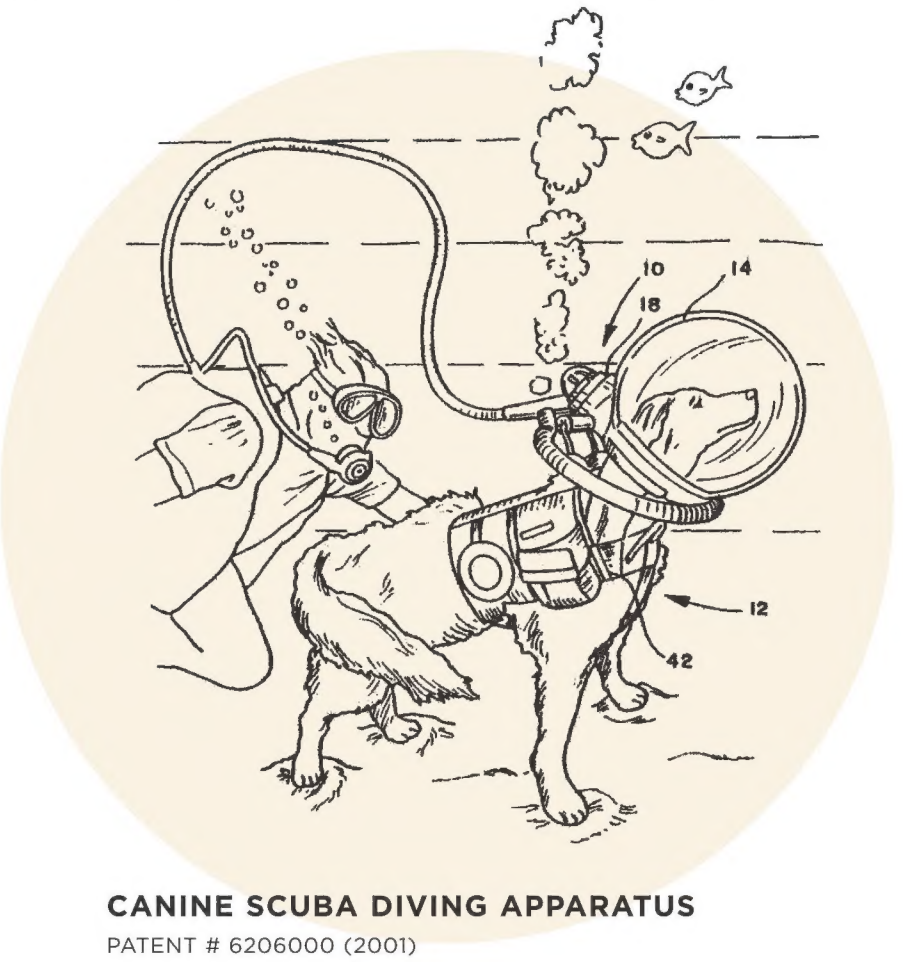
For better or worse, human ingenuity—if you can call it that—knows no bounds

LAST YEAR, the U.S. Patent Office issued 189,597 patents. Sure, some went to scientists striving for the next miracle drug or a zippier microchip. But for every Jonas Salk working in a lab, tens of thousands of ordinary Joes and Janes are noodling around in garages to make a finer foam finger, a better golf ball washer, or scuba gear for dogs. Some, from a new book, that caught our eye:

BEERBRELLA

PATENT # 6637447 (2003)

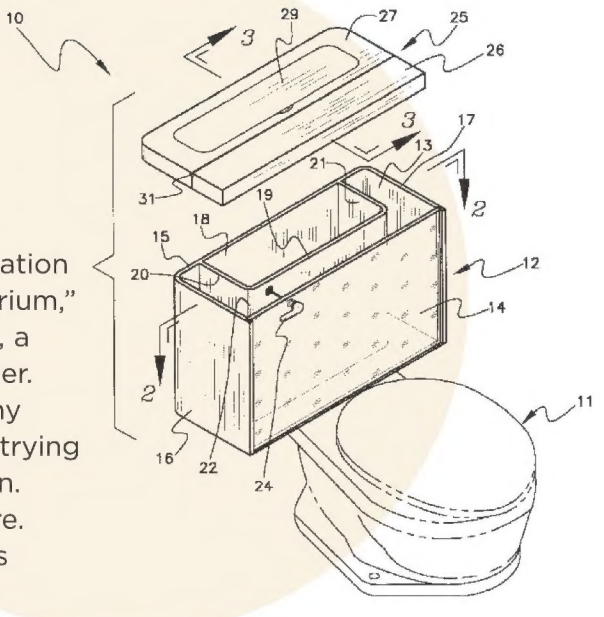
"We were sitting around a pool drinking, and one of us commented that she wished there was a way to keep her beer cold," says patent attorney Robert Bell, 44, one of the three inventors of this giant leap in human progress. "The 'beerbrella' was born then and there with a little duct tape, a paper cocktail umbrella, a wire coat hanger and, of course, a few more beers."



CANINE SCUBA DIVING APPARATUS

PATENT # 6206000 (2001)

Dwane Folsom, 68, an air conditioning technician in Boynton Beach, Florida, made this rig for his dog, Shadow. "She likes water," says Folsom's wife, Violet, "and used to whine whenever we left her on the diving platform." Shadow has been down at least 200 times in water up to 12 feet. "But she's getting pretty old—15—so we don't ask her to dive anymore." says Folsom.



TOILET TANK AQUARIUM

PATENT # 5983411 (1999)

"I wanted to call it an 'Aqua-mode,' a combination of commode and aquarium," says Herb Demoret, 76, a retired merchant mariner. "Fifty years ago, I let my brother talk me out of trying to patent a straw spoon. Now they're everywhere. I'm not going to let this one get away."

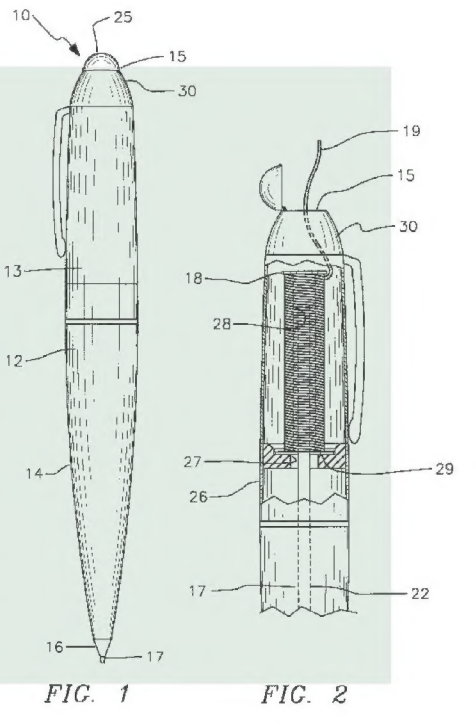


FIG. 1 FIG. 2

COMBINATION WRITING UTENSIL AND FLOSS DISPENSER

PATENT # 6024104 (2000)

"It was just basically a brainstorm," says dentist Jeffery Dolberry, 43. "I thought of it as a way to help Americans fight periodontal disease." Thanks, Jeff.

Adapted from Patently Ridiculous *by Richard Ross.*

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